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ABSTRACT

Each year several hundred thousand young men and women join the ranks of the unemployed because they have terminated their formal education without having mastered the type of skills necessary to become contributing members of society. As a result, many of these individuals are doomed to become burdens on society. One solution to this problem lies in the development of expansive vocational training programs which would involve the adoption of specific extended school year programs. Thus, this document describes school organization patterns which can set the stage for an influx of new students into ongoing or new vocational training programs, including needed changes in administrative and teaching practices. Major sections of the document are: (1) Releasing Learning Space In An Occupational Training Center Through Adoption Of The Multiple Trails Continuous Learning Year Concept, (2) The Multiple Session Day Program, (3) The Multiple Session Week, and (4) The Multiple Session Occupational Education Program. Also included is a section of related issues and answers. (Author/JS)

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The Impact of a Rescheduled School Year on Vocational Training Centers in New York State

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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Occupational Education Research
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THE IMPACT OF A RESCHEDULED SCHOOL YEAR ON VOCATIONAL TRAINING CENTERS IN NEW YORK STATE

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March 1971

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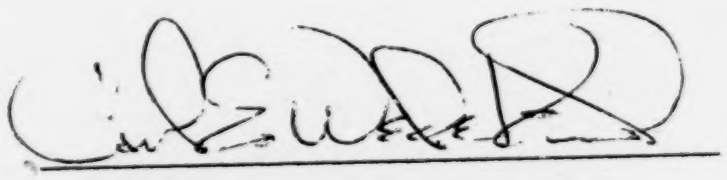
FOREWORD

Vocational Training Centers are becoming as much a part of the New York State educational scene as the one room schoolhouse was at the turn of the century. The impact of a rescheduled school year on these centers can be important enough to have influence on the local component school districts which send students to the training center.

The concept of the rescheduled school year is not new, but the involvement of vocational training centers with this concept is new.

This book suggests many rescheduled school year plans that might be used by the administrative training centers, but above all points out the adaptability and flexibility of these plans to fit individual situations.

Additional information concerning the rescheduled school year concept may be obtained by writing to the Bureau of Occupational Education Research, State Education Department, Albany, New York 12224.



Carl E. Wedekind, Director
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INTRODUCTION

Each year several hundred thousand young men and women join the ranks of the unemployed because they have terminated their formal education without having mastered the type of skills necessary to become contributing members of society. As a result many of these individuals are doomed to become burdens on the local community, the State, and the Nation. One solution to the problem lies in the development of expansive vocational training programs. A step in this direction has been made through the establishment of vocational training programs in high schools or in special occupational training centers such as those operated in New York State through the Board of Cooperative Educational Services.

Since the demand for occupational training often exceeds the capacity of existing learning centers, many young people are unable to (a) take part in an exploratory program or (b) to even enter into existing occupational training programs. While one solution may be the acquisition of new buildings and/or equipment, it is recommended that serious consideration be given to the adoption of specific extended school year programs in an attempt to release learning space. Field studies have demonstrated how and where additional space can be obtained in existing BOCES Vocational Training Centers.

Changes in current administrative and teaching practices will be necessary, but some of them may be considered as changes that are already long overdue. They should be instituted regardless of whether an extended school year plan is adopted.

The following pages describe school organization patterns which can set the stage for an influx of new students into ongoing or new vocational training programs.

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CHAPTER I

BASIC ISSUES

The general public which has been supporting elementary and secondary school programs is being called upon to support expanded prekindergarten and post-high school programs. These extensions of the educational ladder are going to cost money which means it may be exceedingly difficult to obtain funds to expand vocational training programs. At issue is the question of priorities based on the importance placed on specific educational objectives and the allocation of responsibility for their realization.

For many years vocational training has been listed as a basic objective of our secondary schools. However, few high schools have developed a program which really prepares students for a direct entry into the field of work. In a sense the failure of the typical high school to meet the needs of its terminal students had lead to the growth of the BOCES Occupational Training Centers. The attitude of the secondary school staff and the administrators has to change because it is a barrier to the development of an educational pattern which meets all the needs of modern youth. The needs of the vocationally oriented student must be placed on a par with the academic or college bound student.

The high school staff has a responsibility to help parents and students see the need for vocational training in order to get their support for funds to send more students to occupational training classes.

> Example #1--A high school principal said, "Yes, we encourage our slow progressing students to drop out of high school." Then he brought out his list of students who had won academic honors in math and science. This was his world--a world which did little to recognize the vocational student.

Example #2--An industrial arts teacher in a large Bronx high school said, "I'm lucky to have enough students to keep me busy all day because parents do not want their children to become 'blue collar workers'." When asked about the responsibility of the guidance staff to help sell the value of vocational education, he admitted that his colleagues over-emphasized the academic phases of the curriculum.

Example #3--The Board of Education was asked to provide extra funds for additional students in an occupational training program. The Board was ready to reject the request until a group of 30 determined parents virtually took over the meeting with their insistence that funds be released to support the expansion of the occupational training program.

Barriers--A Matter of Dollars

Example #3 may stem from the philosophy barrier. Many school board members are not convinced that the vocational training program is as important as the academic program.* They see the added tuition cost of vocational training students as an extra cost. Frequently, this becomes an obstacle to the student who wants to learn a trade. In some school districts the question is not one of determining how many students want vocational education. The real issue is determining how much of the total school budget should be expended to support the BOCES** Vocational Training Program. As a result school board members establish a quota of students for the occupational training program.

The dollar barrier is one which must be considered if the occupational training programs are to be expanded in some school districts.

Illustration--Field studies have shown that the BOCES Occupational Training facilities can take up to 50 percent more students by reorganizing its basic program in terms of a longer school year. Admittedly, there is a need for additional classes in the future, but what about now.

* School Board Study
** Boards of Cooperative Educational Services

How many students would be encouraged to learn a trade if the new classes were to be formed overnight?

Would boards of education immediately provide funds to support a 50 percent increase in the number of students enrolled in new occupational training classes?

When queried, three top school administrators said, "We would be wasting our time to even suggest placing more students in the occupational training program. It costs too much money to educate these kids. We have other uses for our funds."

Here we find an issue which educators must face. School administrators and teachers must be prepared to advise and help place students other than the potential academic failure in occupational training programs. They must be prepared to defend their actions in terms of budgetary requests.

Barrier--A Longer School Year

Field studies have shown very little resistance to an extension of the school year by the occupational training staff. Again, students who would ordinarily have dropped out of a regular high school program have willingly worked in vocational training classes which were extended into the summer.

Due to special trade requirements some students have been unable to complete minimum course requirements in 2 years. Cosmetology, for example, requires 1,000 hours which cannot be met in a program providing 2½ to 2 2/3 hours of instruction per day. The need to provide additional instructional time to students working in these selected fields has created problems for the staff. One solution has been to schedule some students into a special Saturday program. Another solution has been the institution of an abbreviated 4 to 6 week summer extension of the program for selected students. Here the limited nature of the program has created a financial problem.

However, these special programs have substantiated other studies which show that students and instructors can take a longer school year.

Preliminary field studies show that some secondary school administrators and teachers are interested in the concept of a longer school year, however, others are opposed to the idea. This opposition may be due to:

1. a lack of understanding concerning the nature of new school organizational patterns;
2. a lack of readiness for innovation;
3. a fear of change or the problems associated with changes;
4. the pressure of vested interests;
5. a lack of flexibility;
6. a conflict of educational philosophies;
7. the need for curriculum revision;
8. administrative insecurity;
9. over concern about preserving the status quo of scheduling or teaching procedures;
10. failure to communicate with the public.

The resistance of a sending school to rescheduling the school year for all students can be a barrier to the development of an extended school year program by the BOCES Vocational Training Center.

> An extension of the school year becomes more meaningful to occupational training students if sending and receiving schools elect to adopt a new and longer educational time line.

It is difficult to institute the cooperative extended school year program in the sending schools but this does not mean that it is necessary to abandon the concept. There are several alternate ESY* designs which can be considered by either the comprehensive high school or by the BOCES Occupational Training Center.

*Extended School Year

An Adequate Return on Invested Capital

The typical occupational training program is a costly operation. The curriculum requires facilities with learning centers that are much larger than the traditional high school classroom. While occupational training centers lack the large gymnasiums or auditoriums found in the typical high school, these specialized schools require considerable space and costly equipment.

It has been estimated that New York State has invested between $175 million to $200 million in vocational school plants and equipment. This means a great deal to the taxpayer who asks what can be done to give him a better return on his investment.

Illustration--A survey of typical BOCES occupational training centers revealed

1. The instructional areas, i.e., classrooms and equipment, are generally used with and by students approximately 5 hours a day.

2. Due to obligations to the home or sending school the training center is seldom able to provide more than 165 days of classroom instruction during the regular school year.

Since some of the occupational school administrators insist that they are providing 180 days of instruction, one can assume that the maximum school plant utilization does not exceed 900 hours per year. If the 165 to 175 day terms are used it becomes apparent that the facilities are only used for instruction between 825 to 850 hours per year.

On a comparative basis a factory operating 5 days a week and 8 hours a day would be productive for 2080 hours a year. In both of these illustrations greater return could be gained by an increase in the length of the day or total work period.

An airline official said his company would go out of business if a $3 million plane was left idle on the ground for an extended period.

Is there a parallel when we have $3 million occupational training centers closed and unproductive for many hours each day and for several months each year? The issue becomes increasingly real when we realize that society supports millions of people who could be self-sufficient if the occupational training centers could be opened to the youth of today who otherwise may become wards of the State or Nation tomorrow.

Selecting the Appropriate Solution to the Problem of Space

When the demand for additional occupational training classes exceeds the availability of classroom space, the administrator sees the floating of a bond issue as the solution. He knows that the request for new money may be rejected by the public, but he proceeds to set the machinery in motion to obtain a new school plant or addition. Having once made this decision he is generally faced with no alternative.

> Example--The public in school district "S" rejected the school board's request for a new school on three different occasions. When an extended school year plan was developed which would have provided the community with all of the basic classrooms required, it was rejected by the superintendent of school with the statement,
>
> > "The school board has been telling the public that the school children's future is in jeopardy unless a new school is built. If we now introduce the concept of a release of space through the rescheduling of the school year it will be a public acknowledgement that the school board and the administration has not been telling the truth."

Actually, the foregoing statement may be questioned because the school board was acting in good faith. The members did not understand the basic principles of rescheduling the school year. Some of the designs or plans are new and are not easily understood. The potential economic advantages

of a particular design are not evident without study and without a recognition that the adoption of new educational time lines can provide educational advantages to the children.

A school system appears to have no choice except to build when school facilities are obsolete or nonexistent. The solution becomes one of renovating or building a new school for the program. The situation changes, however, if an existing school has a core of facilities and equipment essential for a good program. The fact that the enrollment is rising may not warrant construction of a new school plant or an addition to the old one because ESY plans can be adopted which will increase the capacity of existing facilities.

The Need To Coordinate the Time Schedule of a Vocational Training Center with that of the Sending Schools

The BOCES Occupational Training Program is a cooperative venture by several school districts. Therefore, any modification of an educational calendar must be considered in terms of its potential impact on the sending schools. This is especially true where consideration is given to the feasibility of rescheduling the school year. Ideally, the extended school year concept could be accepted or adopted by all of the sending schools, because there is at least one ESY plan which could help administrators develop a greater degree of flexibility in their own high schools than is currently the case.

In the absence of a uniform move toward an extended school year, the need for additional space in occupational training centers can still be met without mandating adoption of an ESY program in the sending schools, but the approach will be somewhat different.

The Barrier of Time

Frequently, occupational training school schedules have had to be reduced due to the barrier of time. For example, the curriculum guidelines in one center were built around 3-hour instructional periods. Due to time conflicts in the sending schools, the vocational center schedule was reduced to a 2½-hour period.

Such a cutback in time can be most disturbing to instructors who believe occupational students need all the training they can get. Unfortunately, problems of transportation or an inflexible schedule in the sending school become barriers which threaten the success of occupational programs. In many high schools, students interested in learning a trade are automatically eliminated from the specialized occupational program due to scheduling conflicts.

Example #1--Virginia is interested in cosmetology, but she is carrying a very heavy academic load. If she is to be released from school for classes at the occupational center, it will be necessary for her to drop one or two basic courses. This creates a conflict similar to that faced by other students who found scheduling problems a barrier to work at the occupational training center.

Example #2--Jerry wants to sign up for a course in conservation; however, he finds it is virtually impossible to clear an afternoon to work in the occupational center. His daily schedule is open. He has several study periods, but a single history course which he must take for graduation is offered in the middle of the afternoon. The result is an unhappy student, who with too much time on his hands, is constantly in trouble.

Some secondary school students have little interest in the academic program, but they find satisfaction and considerable success in extra curricular activities. Therefore, they have a conflict of remaining as full-time academic students or becoming special students who are released

from the academic high school for a portion of the school day.

Example #3--The "S" high school is located about 35 miles from the occupational training center. The problems of transportation are such that students who take part in the occupational training program are unable to get back to the high school in time to take part in club activities or the athletic program. Guidance counselors report that several students have deferred taking an occupational course in preference to continuing in the extracurricular activities.

Insurmountable Barriers--(1) The Length of the Student Day

For some undefined reason educators seem to be afraid to change the length of the student's day when he elects to take part in the occupational training program. As a result the student generally spends a portion of his time between two schools. Often the student has little time to use the specialized resources of either the regular academic high school or the specialized occupational school.

He has little time, for example, to use the library. He may even have to forego gym classes or special help opportunities because the tight time schedule limits his freedom.

Example--A student said "we have little if any time to eat lunch before we go to the occupational school."

"Why," the principal was asked, "don't you extend the day so pressure can be taken off these kids? If you add an extra half hour to the day, these students could travel between schools without having to skip lunch or gobble it down as they ride the school bus."

"Oh, you don't know these kids," he replied. "If you try to lengthen their school day, they won't sign up for the program."

Is this principal correct or is he making a nonresearched assumption? The argument was raised that these occupational training students were receiving something special by their involvement in the regular high school

program and the occupational program. In terms of dollars, the taxpayer is spending an extra $750 to $1,000 a year for the occupational training opportunities that are available to him.

> "Isn't the student willing to accept a slightly longer day in order to take full advantage of the extra education or training being made available."
>
> "No," a principal said, "the student wants to go home when his peermates do."

One may ask whether the students really understand what the extra education costs. To what extent is the administrator admitting that his public relations, in terms of the students, are at a low point? Has anything been really done to let the students know how much is spent on their education as well as the values inherent in the extra training they receive?

Insurmountable Barriers--(2) The School Bus

Since the occupational training center is a shared facility, few students are in the fortunate position to enjoy a campus type setting where they can walk from the academic classroom to the special laboratory or shop in the occupational training center. As a result, they have to cope with the insurmountable barrier of transportation. For most students this involves a trip on the school bus.

Due to the inflexibility of the school day or the inflexibility of the bus schedule, students have to be prepared to drop everything to catch the bus. They cannot remain behind to finish a task or to confer with teachers.

In one occupational center the director said every student had to be out of his building by 2:30 p.m. in order to get the school bus back to the sending schools in time to take the other children home at the 3 o'clock dismissal.

As a result, one could walk through the well equipped occupational training center at 2:35 p.m. and see dozens of expensively equipped classrooms completely deserted. No students or teachers were around; huge machines and technical training resources were idle again.

Few school districts make it a practice to provide special bus runs to or from an occupational center beyond the normal school hours. Occupational students must be returned to the home school for the regular school dismissal.

> "If this isn't done," a principal stated, "we couldn't get them home."

One must admit that transportation is a costly item, but is is also true that many school districts run a late bus for athletes or students who remain behind for special afterschool activities. There is no reason for not making a late bus available to students in the occupational training program. It would go a long way towards taking the pressure off the occupational training student and the directors of such programs.

Insurmountable Barriers--(3) The Money Shortage

There are many educators who will deny that there is a shortage of tax dollars to support new school construction. However, there is evidence that the general public will not automatically approve each request it receives for a new school or an addition to an old one.

> Example--In one New York State area the public defeated a bond issue for a proposed occupational training center by a ratio of eleven to one. While this was an extremely bad defeat, it parallels the rejection of numerous other bond issues for elementary and secondary schools in other parts of the State and country.

Similarly, the rejection of school budgets or permission to raise tax levies has pointed up the need for a new look at current school organizational patterns. Can space be released in the receiving and sending

schools by reorganizing the length of the school day or the length of the school year?

The answer to both questions is "Yes," but it is a "Yes" that depends on readiness to accept a number of changes which lead to increased administrative and teacher flexibility.

Some school districts set a dollar limit on the amount of money which may be expended for occupational school tuition. This quota on the number of students who may take part in the occupational training program is often justified in terms of the so-called extra cost of educating a selected group of students. Actually, the additional cost is not as great as it seems.

Occupational students tend to take a lighter academic load than their college bound classmates. This in a sense helps to compensate for the amount of money spent on their tuition. In many schools the academic student is urged to take five or six basic subjects. As a result his heavy schedule contributes to the need for additional classes, some of which may be extremely small. Studies have shown per pupil costs for a third or fourth year foreign language class in the small centralized school district frequently range from $500 to $800 per pupil.* In such cases, the lack of restriction on the number of subjects taken or the establishment of a minimum enrollment for advanced classes, costs the Board of Education more than is normally spent for the tuition of students who spend half a day away from the home school.

Since money is a problem, the ESY designs outlined in subsequent pages should be considered in terms of potential dollar savings as well as space savings.

*In many schools the average academic class cost the community $2,500 to $3,000 in teacher salary cost alone. This cost per pupil varies in proportion to the number of students enrolled.

When enrollments in an occupational program are limited, it is virtually impossible to project much in the way of dollar savings. However, when the occupational course enrollment creates the need for two or more classes, the extended school year plans outlined reduce per pupil costs in other areas than capital outlay and debt service.

CHAPTER II

RELEASING LEARNING SPACE IN AN OCCUPATIONAL TRAINING CENTER THROUGH ADOPTION OF THE MULTIPLE TRAILS CONTINUOUS LEARNING YEAR CONCEPT

Introduction

Initially, the Multiple Trails Extended School Year Plan was conceived as a means of releasing space, teachers, and dollars in secondary schools. The occupational training centers were to be recipients of a limited number of fringe benefits, essentially more students and greater flexibility. Field studies have since demonstrated that the application of the multiple trails time equalization principles to the occupational training program can lead to a potential 50 percent increase in the availability of learning space in the centers.

Ideally, both sending and receiving schools should adopt a uniform, flexible continuous learning school year calendar. From the point of view of immediacy or need this study describes extended school year designs or patterns of school organization essential for releasing space in occupational training centers which do not require a parallel extension of the school year by sending schools.

The Multiple Trails Concept

Classroom space in the BOCES occupational centers can become available for additional classes through adoption of a lengthened school year design referred to as the Multiple Trails Extended School Year Plan. This new approach to the rescheduling of the school year does not require a rotation of terms or the acceleration of students to realize the goals of economy or increased educational opportunity. It also has the advantage of providing classroom space virtually overnight.

The multiple trails plan releases student time, teaching time and space through a time equalization process. The nature of the rescheduled student's day and/or week depends on the amount of the instructional time provided in a 4, 5, 6, or more week extension of the school year. This extra or "E" time is placed in what has been designated a hypothetical Educational Reserve Bank. It can be drawn upon in the future to meet the needs of individual students or the demands of the school system.

Illustration:

> During the regular school year students in an electronics course attend class for a 2½ hour session a day. In a year they receive 25,500 minutes of instruction.
> (2½ hrs. x 170 days = 425 hrs. or 25,500 mins.)
>
> A 6 week extension of the school year with 4 hour classes enables a student to deposit 7200 minutes or 120 instructional hours in the hypothetical Educational Reserve Bank.
> (30 days x 4 hrs. = 120 hrs. or 7200 mins.)
>
> With time equalization spread over 170 days, the student can complete the electronics course in fewer school days since he has 18,300 minutes of instruction left to complete instead of the 25,500 minutes originally scheduled.
> (25,500 less 7200 min. = 18,300 mins.)

The Use of Modular Time Patterns

In rescheduling the typical high school student's day in a multiple trails program, time is translated into modules. While time modules varying in length can be used as building blocks, the 15 minute module is recommended. Since occupational training classes are generally much longer than a traditional class period, an abbreviated session can still be considered in terms of minutes. The module is really not actually needed in the occupational school; however, for illustrative purposes in

publication all time equalization requirements will be designated in multiples of the 15 minute module.

Approaches to the Release of Learning Space in the Occupational Training Center

The multiple trails concept of time equalization to release space was tested in 15 occupational centers of the State. These field studies pointed out areas of interest, need, and concern. They showed the existence of a wide range in length of class sessions, viz., 2 hours and 15 minutes to 3 hours. However, one of the key elements is not so much the length of class periods, but the way time is distributed through the day. For example, several occupational training centers have set the length of the average class at 2½ hours. This would lead to the conclusion that adoption of the same length extension of the school year will create a new learning time block of equal length: Surprisingly enough this did not occur in many field trials due to the wide disparity in starting and closing times set for the morning and afternoon sessions.

The field studies show that it is possible to reschedule occupational programs in a number of ways to achieve the goal of increased housing capacity. The three proposals which have the greatest appeal and which can be implemented most readily may be classified as follows:

Proposal No. 1--The Multiple Session Day

Proposal No. 2--The Multiple Session Week

Proposal No. 3--The Multiple Session Year

Each pattern provides a different use of student time and space. The first two proposals require a minimal length extension of the school year, but proposal no. 3 requires a fairly long extension of the school year if time equalization is mandatory for completion of designated courses of

study. In order to more fully understand each of the proposals, subsequent chapters will outline a step by step organizational approach which may lead to a selection of a plan or time pattern considered feasible to meet specific occupational training center needs.

The Nature of Proposal No. 1;
The Multiple Session Day

This approach to the multiple trails continuous learning year provides extra learning space through rescheduling instructional time in terms of new time equalization requirements for an extension of the school year by approximately 4, 5, or 6 weeks. The rescheduling leads to the creation of a time block large enough to sponsor a third session without increasing the length of the actual school day.

The Nature of Proposal No. 2;
The Multiple Session Week

This approach requires a compacting of the new equalization time in such a manner that students in the regular program complete their class obligations in 3 days thereby releasing large blocks of time for additional students on the other 2 days.

The Nature of Proposal No. 3;
The Multiple Session Year

This approach calls for the compacting of a large amount of learning time into a lengthened summer session. The new term, conceivably provides as much instruction as is offered in a semester extending over a greater number of weeks. Students are allowed to work through two of the three sessions or trimesters, thereby releasing classroom space for a third group of students.

CHAPTER III

THE MULTIPLE SESSION DAY PROGRAM

The principles of time equalization introduced in the Multiple Trails Extended School Year design can be used to free classroom space for additional students in the typical occupational training center. The design requiring the least amount of change in the sending schools calls for rescheduling the student's day. The multiple session day pattern of school organization will provide students with the same amount of instructional time they receive in the regular school year. However, the instructional time provided in the summer is used to compensate for the recommended shortened class sessions. Through the modification of student's day it is possible to set the stage for the admission of a third class of students. This in effect provides a 50 percent increase in classroom space without shortchanging any of the students.

This chapter will demonstrate how time schedules can be modified to realize a space or dollar objective. The length of the summer segment will determine the number of time modules required for a designated class. In several instances it will be possible to meet course requirements in at least one of the three new sessions without having to extend the school year.

The Amount of Instruccional Time Provided in an Occupational Training Program

The minimal academic school year in New York State calls for 180 instructional days. Students in occupational training programs find it virtually impossible to attain that goal in their specialized field. This is due to numerous interruptions in the home school or to closings for

Regents examinations. Studies show the typical occupational training center is lucky if it can hold classes 170 days a year. The directors of several BOCES Centers said 165 days would be closer to reality than the reported 179 day average.

For purposes of time equalization one can work with the accepted 180 days minimum; however, 170 days is recommended. Both 170 and 180 day school year requirements were used in calculations for the numerous field study charts.

Figures 1 and 2 show the amount of instructional time provided in 170 and 180 instructional days. Each table shows the number of minutes of instruction provided per day, per week, and for the regular school year. In addition, they show the number of 15 minute modules of instruction currently provided per week for designated length class sessions. By simple inspection the reader can determine the amount of time provided in any occupational training program. For example, a school providing 2 hours and 35 minutes of instruction per class session will provide under the 170 day table:

155 minutes per day
775 minutes or 51 to 52 modules per week
26,350 minutes or 439 hours of instruction per year

The Instructional Time Provided in the Extended Learning Segment

The assumption has been made that the normal school year calendar will be extended by 4, 5, 6, or more weeks. The recommended length of the extended learning segment is 6 weeks, but at least two directors showed interest in an 8 week session. Actually, the length of the learning session may vary according to the time required for equalization and/or the length of the summer class period.

Figure 1

AMOUNT OF INSTRUCTIONAL TIME PROVIDED IN OCCUPATIONAL TRAINING PROGRAMS IN THE REGULAR SCHOOL YEAR

EQUALIZATION OF THE 170 DAY CALENDAR

Length of the Class Session	# of Min. Per Day	# of Min. Per Week	# of 15 Min. Modules Per Wk	# of Min. Per Year	# of Hours Per Year
2 Hours	120	600	40	20,400	340
2 Hrs. 5 Min.	125	625	41 - 42	21,250	354+
2 Hrs. 10 Min.	130	650	43 - 44	22,100	368+
2 Hrs. 15 Min.	135	675	45	22,950	382+
2 Hrs. 20 Min.	140	700	46 - 47	23,800	396+
2 Hrs. 25 Min.	145	725	48 - 49	24,650	410+
2 Hrs. 30 Min.	150	750	50	25,500	425
2 Hrs. 35 Min.	155	775	51 - 52	26,350	439
2 Hrs. 40 Min.	160	800	53 - 54	27,200	453+
2 Hrs. 45 Min.	165	825	55	28,050	467+
2 Hrs. 50 Min.	170	850	56 - 57	28,900	481+
2 Hrs. 55 Min.	175	875	58 - 59	29,750	495
3 Hours	180	900	60	30,600	510
3 Hrs. 5 Min.	185	925	61 - 62	31,450	524+
3 Hrs. 10 Min.	190	950	63 - 64	32,300	538+
3 Hrs. 15 Min.	195	975	65	33,150	552+
3 Hrs. 20 Min.	200	1000	66 - 67	34,000	566
3 Hrs. 25 Min.	205	1025	68 - 69	34,850	580+
3 Hrs. 30 Min.	210	1050	70	35,700	595

Figure 2

AMOUNT OF INSTRUCTIONAL TIME PROVIDED IN OCCUPATIONAL TRAINING PROGRAMS IN THE REGULAR SCHOOL YEAR

EQUALIZATION OF THE 180 DAY CALENDAR *

Length of the Class Session	# of Min. per Day	# of Min. per Week	# of 15 Min. Modules per Wk	# of Min. per Year	# of Hours per Year
2 Hours	120	600	40	21,600	360
2 Hrs. 5 Min.	125	625	41 - 42	22.500	375
2 Hrs. 10 Min.	130	650	43 - 44	23,400	390
2 Hrs. 15 Min.	135	675	45	24,300	405
2 Hrs. 20 Min.	140	700	46 - 47	25,200	420
2 Hrs. 25 Min.	145	725	48 - 49	26,100	435
2 Hrs. 30 Min.	150	750	50	27,000	450
2 Hrs. 35 Min.	155	775	51 - 52	27,900	465
2 Hrs. 40 Min.	160	800	53 - 54	28,800	480
2 Hrs. 45 Min.	165	825	58	29,700	495
2 Hrs. 50 Min.	170	850	56 - 57	30,600	510
2 Hrs. 55 Min.	175	875	58 - 59	31,500	525
3 Hours	180	900	60	32,400	540
3 Hrs. 5 Min.	185	925	61 - 62	33,300	555
3 Hrs. 10 Min.	190	950	63 - 64	34,200	570
3 Hrs. 15 Min.	195	975	65	35,100	585
3 Hrs. 20 Min.	200	1000	66 - 67	36,000	600
3 Hrs. 25 Min.	205	1025	68 - 69	36,900	615
3 Hrs. 30 Min.	210	1050	70	37,800	630

*Subject to reduction due to weather, Regents examinations, and the like.

The 4 hour extended summer learning session appeals to most instructors, but this could be lengthened to cut back on the number of weeks required for time equalization. Some students, for example, favored a 5 week extension with a 5 hour day (5 weeks x 5 hours per day = 7,500 minutes) compared to a suggested 6 week extension with 4 hour classes (6 weeks x 4 hours per day = 7,200 minutes).

Figure 3 presents a picture of the time provided in extended learning segments of different lengths. The figure shows the number of minutes and hours provided per week and per segment for designated length learning periods. Thus variation R shows students working in a 6 week summer extension of the school year with 4½ hour classes will receive:

1,350 minutes or 22½ hours of instruction per week
and
8,100 minutes or 135 hours per extended segment

Extended school year research studies have demonstrated the ability of secondary school students to complete full year academic courses by attending classes 4 hours a day for 6 weeks. These students showed no ill effects from their lengthened class periods. The fact that they conducted their studies in the summer and did as well, if not better, than comparable students who took a full year to complete similar courses merely supports the thesis that occupational training students will have no difficulty in their fields of study if they continue ongoing programs into the summer.

Present Use of Classroom Space in the Occupational Training Center

Figure 4 shows the schedule for the use of facilities in the occupational center. Students in the morning session attend class from 8:45 a.m. to 11:15 a.m. This provides them with a standard 2½ hour class per day or a total of 750 minutes of instruction per week (50 modules).

Figure 3

THE INSTRUCTIONAL TIME PROVIDED IN THE EXTENDED LEARNING SEGMENT

Variations	# of Hours Per Week	# of Minutes Per Week	# of Hours per Extended Segment	# of Minutes per Extended Segment
A--4 weeks at 3 hours a day	15	900	60	3600
B--5 weeks at 3 hours a day	15	900	75	4500
C--6 weeks at 3 hours a day	15	900	90	5400
D--7 weeks at 3 hours a day	15	900	105	6300
E--8 weeks at 3 hours a day	15	900	120	7200
F--4 weeks at $3\frac{1}{2}$ hours a day	$17\frac{1}{2}$	1050	70	4200
G--5 weeks at $3\frac{1}{2}$ hours a day	$17\frac{1}{2}$	1050	$87\frac{1}{2}$	5250
H--6 weeks at $3\frac{1}{2}$ hours a day	$17\frac{1}{2}$	1050	105	6300
I--7 weeks at $3\frac{1}{2}$ hours a day	$17\frac{1}{2}$	1050	$122\frac{1}{2}$	7350
J--8 weeks at $3\frac{1}{2}$ hours a day	$17\frac{1}{2}$	1050	140	8400
K--4 weeks at 4 hours a day	20	1200	80	4800
L--5 weeks at 4 hours a day	20	1200	100	6000
M--6 weeks at 4 hours a day	20	1200	120	7200
N--7 weeks at 4 hours a day	20	1200	140	8400
O--8 weeks at 4 hours a day	20	1200	160	9600
P--4 weeks at $4\frac{1}{2}$ hours a day	$22\frac{1}{2}$	1350	90	5400
Q--5 weeks at $4\frac{1}{2}$ hours a day	$22\frac{1}{2}$	1350	$112\frac{1}{2}$	6750
R--6 weeks at $4\frac{1}{2}$ hours a day	$22\frac{1}{2}$	1350	135	8100
S--7 weeks at $4\frac{1}{2}$ hours a day	$22\frac{1}{2}$	1350	$157\frac{1}{2}$	0
T--8 weeks at $4\frac{1}{2}$ hours a day	$22\frac{1}{2}$	1350	180	00
U--4 weeks at 5 hours a day	25	1500	100	6000
V--5 weeks at 5 hours a day	25	1500	125	7500
W--6 weeks at 5 hours a day	25	1500	150	9000
X--7 weeks at 5 hours a day	25	1500	175	10500
Y--8 weeks at 5 hours a day	25	1500	200	12000

Students in the afternoon session attend class from 12:15 p.m. to 3:00 p.m. This provides them with a 2 3/4 hour class per day or a total of 825 minutes of instruction per week (51 modules). The afternoon students receive an extra 15 minutes of instruction per day or 75 minutes extra instruction per week.

In this program the classroom is not used between 11:15 a.m. and 12:15 p.m. While this may not appear significant, the fact remains that expensive equipment and materials are not being used for 16 percent of the school day (figure 4).

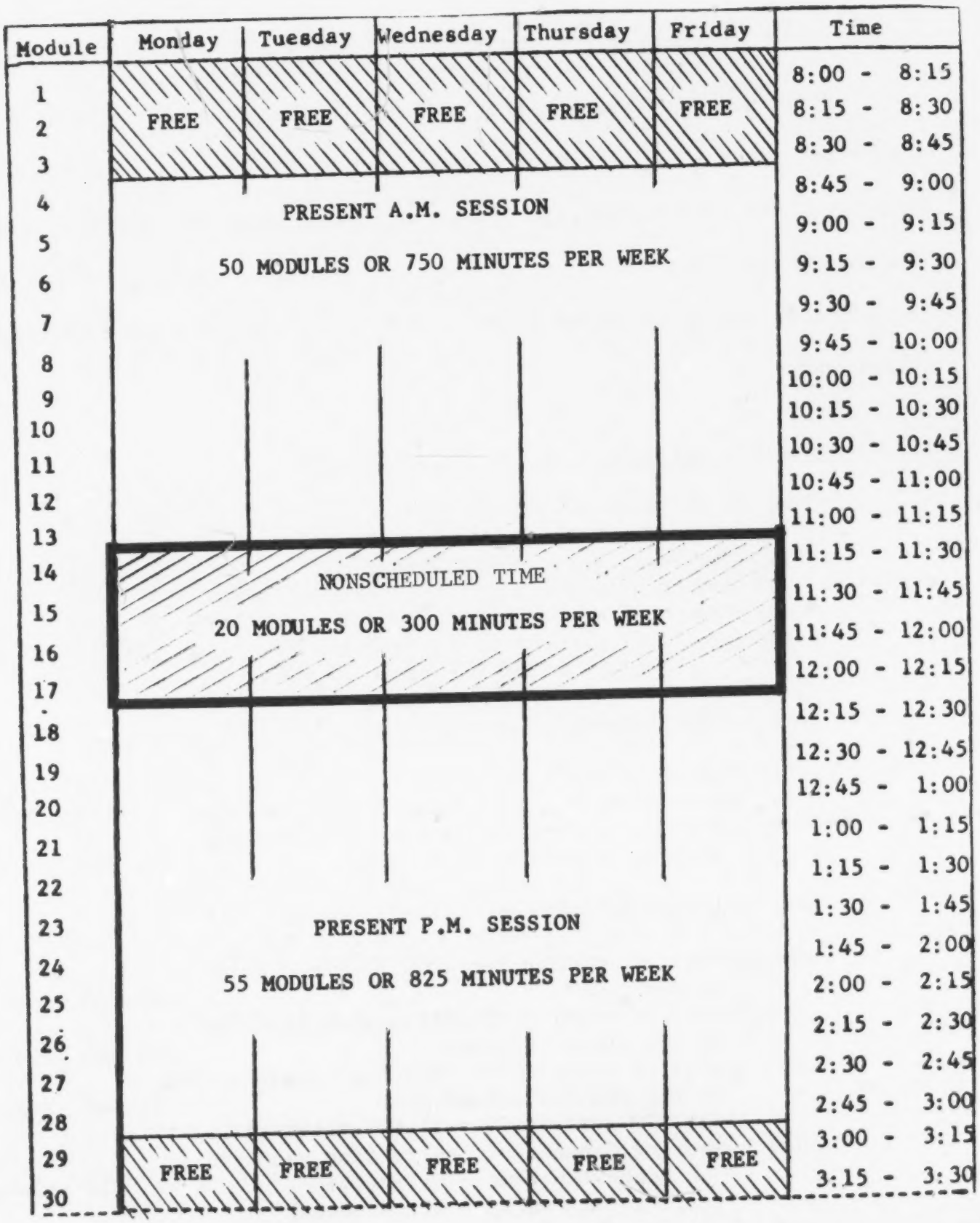
Potential Use of Classroom Space With Adoption of the Multiple Trails Concept

Figures 5 to 14 illustrate what can be done with space in an occupational training center if different variations of the ESY Plan are adopted. In each case, time earned in an extension of the school year is deducted from the amount of instruction currently provided in the A.M. and P.M. sessions. Since the time equalization releases space time for both the morning and afternoon sessions a larger block of time is opened up in the middle of the day. In variations #1 and #2 this new time block may not be long enough to provide the same amount of instruction that is normally provided a group of students, but frequently enough time is released to at least set the stage for introducing a special program or a modification of the regular program.

Subsequent variations use a longer learning period in the summer to decrease the amount of time required in the normal morning and afternoon sessions. In doing this one has a parallel release of time for a new session in the middle of the day.

Figure 4

PRESENT USE OF CLASSROOM SPACE IN AN OCCUPATIONAL TRAINING CENTER



While the figures can be used to show the impact of various time extensions on the school and its time requirements, the following pages will show the mathematics or thinking used to picture the use of space in a typical occupational training center.

Variation #1--A Simple Time Extension with Time Equalization for 170 Instructional Days

This variation assumes that the students electing to work in the summer extension will receive the same amount of instruction in this period that they have been receiving. In other words, students currently attending classes for 2½ hours will receive the same amount of instruction per day in the extended period in order to lower time requirements during the new school year.

A. Calculations for A.M. Session (Variation #1)

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (170 days x 150 Minutes = 25,500)	25,500	Minutes

2. Time in the extended segment.

(a) Number of extra days	30	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction in summer segment (30 days x 150 mins.)	4,500	Minutes

3. Time requirements with time equalization.

(a) Number of minutes required in the regular school year	25,500	Minutes
(b) Number of minutes of instruction provided in the summer segment	4,500	Minutes
(c) Number of minutes left for time equalization in the regular school year (25,500 less 4,500 = 21,000 minutes)	21,000	Minutes
(d) Number of minutes of instruction required per week with time equalization (21,000 ÷ 34 weeks = 617 Minutes)	617	Minutes

(e) Number of modules required per week* (617 min. ÷ 15 min. = 41 modules)	41	Modules

Figure 5 shows the A.M. class as one which requires 41 modules or 615 minutes a week for time equalization.

B. Calculations for P.M. Session (Variation #1)

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year (170 days x 165 mins. = 28,050)	28,050	Minutes

2. Time in the summer segment.

(a) Number of extra days	30	Days
(b) Number of minutes of instruction per day	175	Minutes
(c) Number of minutes in the summer segment (30 days x 175 mins. = 5,250)	5,250	Minutes

3. Time requirements with time equalization.

(a) Number of minutes required in the regular school year	28,050	Minutes
(b) Number of minutes of instruction provided in the summer segment	5,250	Minutes
(c) Number of minutes left for time equalization in regular school year (28,050 less 5,250 mins. = 22,800)	22,800	Minutes
(d) Number of minutes of instruction required per week with time equalization	670	Minutes
(e) Number of modules required per week	45	Modules

Figure 5 shows that the P.M. class needs can be met in a session providing 45 modules or 675 minutes of instruction per week. This is a reduction of 150 minutes a week in the time that is presently allocated for this session.

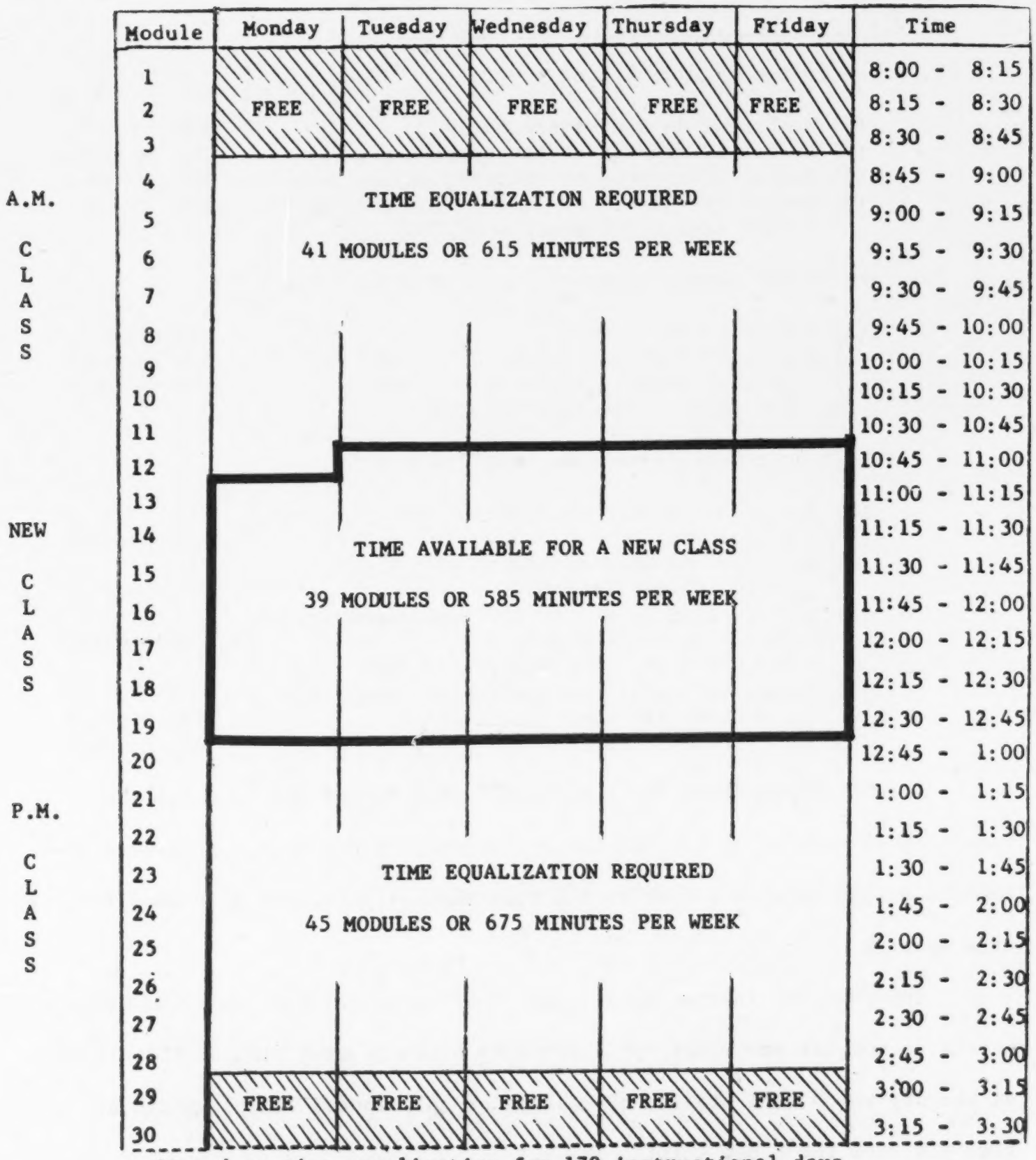
The combined instructional time provided in the A.M. and P.M. session totals 86 modules per week. This leaves a block of free time in the middle of the day which will provide 39 modules or 585 minutes of instructional time per week for a new third session.

*In this study the recommended length module is 15 minutes long, however, other modules of time may be readily used.

Figure 5

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER

VARIATION #1--A SIMPLE TIME EXTENSION WITH TIME EQUALIZATION FOR 170 DAYS*



*Based on time equalization for 170 instructional days.

Variation #2--A Simple Time Extension With Time Equalization for 180 Instructional Days

While the field studies repeatedly indicated that the typical occupational training program is limited to no more than 170 actual instructional days, some educators continue to speak of it as though it were a 180 day program. Figure 6 shows what the availability of space will be with a simple time extension of an actual 180 day occupational training program.

The time equalization required in figure 6 is based on the assumption that students in the extended segment will continue to attend classes based on the time provided in the regular school year session, i.e., 150 minutes per day.

A. Calculations for the A.M. Session (Variation #2)

1. Time in the regular school year.

(a) Number of days of instruction	180	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (180 days x 150 minutes = 27,000)	27,000	Minutes

2. Time in the extended segment.

(a) Number of extra days	30	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction in the summer segment (30 days x 150 minutes)	4,500	Minutes

3. Time requirements with time equalization.

(a) Number of minutes required in the regular school year	27,000	Minutes
(b) Number of minutes of instruction provided in the summer segment	4,500	Minutes
(c) Number of minutes left for time equalization in the regular school year (27,000 less 4,500 = 22,500 minutes)	22,500	Minutes
(d) Number of minutes of instruction required per week with time equalization (22,500 ÷ 36 weeks = 625 minutes)	625	Minutes
(e) Number of modules required per week	42	Modules

Figure 6

PROJECTED USE OF CLASSROOM FACILITIES IN THE
OCCUPATIONAL TRAINING CENTER

VARIATION #2--A SIMPLE TIME EXTENSION WITH TIME EQUALIZATION FOR 180 DAYS

	Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
	1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
	2						8:15 - 8:30
	3						8:30 - 8:45
	4						8:45 - 9:00
A.M.	5	TIME EQUALIZATION REQUIRED					9:00 - 9:15
	6	42 MODULES OR 630 MINUTES PER WEEK					9:15 - 9:30
C	7						9:30 - 9:45
L	8						9:45 - 10:00
A	9						10:00 - 10:15
S	10						10:15 - 10:30
S	11						10:30 - 10:45
	12						10:45 - 11:00
	13						11:00 - 11:15
	14	TIME AVAILABLE FOR A NEW CLASS					11:15 - 11:30
NEW	15	37 MODULES OR 555 MINUTES PER WEEK					11:30 - 11:45
C	16						11:45 - 12:00
L	17						12:00 - 12:15
A	18						12:15 - 12:30
S	19						12:30 - 12:45
S	20						12:45 - 1:00
	21						1:00 - 1:15
P.M.	22						1:15 - 1:30
	23	TIME EQUALIZATION REQUIRED					1:30 - 1:45
C	24	46 MODULES OR 690 MINUTES PER WEEK					1:45 - 2:00
L	25						2:00 - 2:15
A	26						2:15 - 2:30
S	27						2:30 - 2:45
S	28						2:45 - 3:00
	29	FREE	FREE	FREE	FREE	FREE	3:00 - 3:15
	30						3:15 - 3:30

A comparison of the 170 and 180 day instructional programs show a differential of 1,500 minutes a year. With time equalization the A.M. students in the projected programs will need one more module of instruction per week in variation #2 than those in the variation #1 program.

B. Calculations for the P.M. Session (Variation #2)

1. **Time in the regular school year.**

(a) Number of days of instruction	180	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year (180 days x 165 minutes = 29,700)	29,700	Minutes

2. **Time in the extended segment.**

(a) Number of extra days	30	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction in the summer segment (30 days x 165 minutes)	4,950	Minutes

3. **Time requirements with time equalization.**

(a) Number of minutes required in the regular school year	29,700	Minutes
(b) Number of minutes of instruction provided in the summer segment	4,950	Minutes
(c) Number of minutes left for time equalization in the regular school year (29,700 less 4,950 = 24,750 minutes)	24,750	Minutes
(d) Number of minutes of instruction required per week with time equalization (24,750 ÷ 36 weeks = 688 minutes)	688	Minutes
(e) Number of modules required per week (688 mins. ÷ 15mins. = 46 modules)	46	Modules

Since the afternoon student schedule will also require one more module per week for equalization than is the case with the 170 day equalization schedule, the middle session will have 37 fifteen minute modules of time available for new class activities. This is two modules less than is provided in variation #1.

Variation #3--Provides Time Equalization Based on a 4 Week Extension of the School Year with 4 Hour Classes

The daily time schedule for variation #3 is based on a rescheduling of student class activities in terms of the time equalization requirements for a 4 week extension of the school year with 4 hour classes.

Figure 7 shows the morning session will require 41 modules or 615 minutes of instruction while the afternoon session will require 46 modules or 690 minutes of instruction per week. Thirty- eight modules or 570 minutes a day will be available for a new class.

A. Calculations for the A.M. Session (Variation #3)

1. **Time in the regular school year.**

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (170 days x 150 minutes = 25,500)	25,500	Minutes

2. **Time in the extended segment.**

(a) Number of extra days	20	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in summer segment (20 days x 240 minutes = 4,800)	4,800	Minutes

3. **Time requirements with time equalization.**

(a) Number of minutes in the regular school year	25,500	Minutes
(b) Number of minutes of instruction provided in the summer segment	4,800	Minutes
(c) Number of minutes left for time equalization in the regular school year	20,700	Minutes
(d) Number of minutes of instruction required per week with time equalization (20,700 minutes ÷ 34 = 609)	609	Minutes
(e) Number of modules required per week (609 minutes ÷ 15 minutes = 41)	41	Modules

B. Calculations for the P.M. Session (Variation #3)

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year (170 days x 165 minutes = 28,050)	28,050	Minutes

2. Time in the extended segment.

(a) Number of extra days	20	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in the extended segment(20 days x 240 minutes)	4,800	Minutes

3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	28,050	Minutes
(b) Number of minutes of instruction provided in the extended segment	4,800	Minutes
(c) Number of minutes left for time equalization in the regular school year	23,250	Minutes
(d) Number of minutes of instruction required per week with time equalization (23,250 Minutes÷ 34 = 684 minutes)	684	Minutes
(e) Number of modules required per week	46	Modules

Variation #4--Provides Time Equalization for a 5 Week Extension of the School Year with 4 Hour Classes

Figure 8 shows the nature of a rescheduled week with time equalization for a summer segment providing a 5 week extension of time with a 4 hour session.

A. Calculations for the A.M. Session (Variation #4)

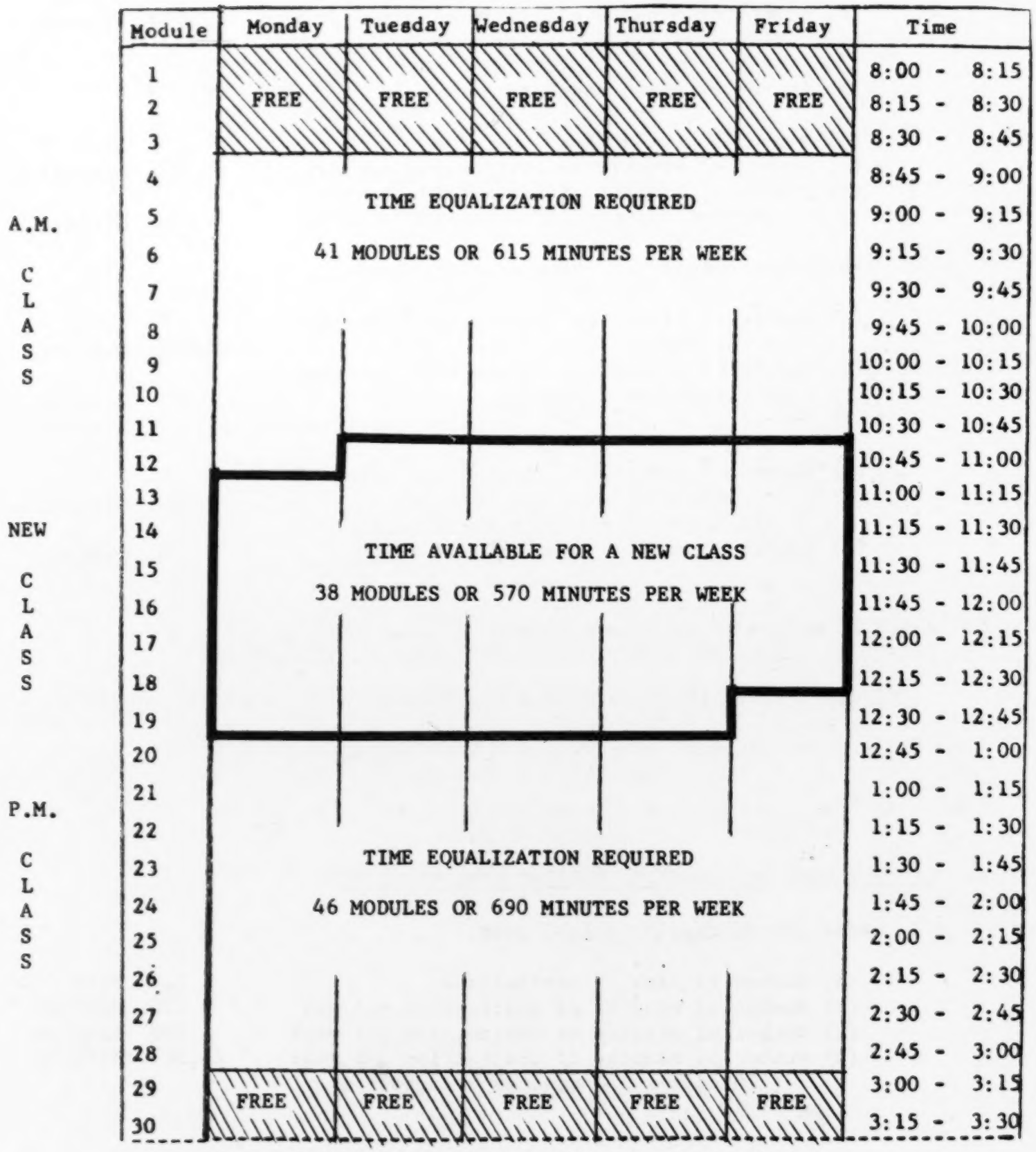
1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (170 days x 150 minutes = 25,500)	25,500	Minutes

Figure 7

PROJECTED USE OF CLASSROOM FACILITIES IN THE
OCCUPATIONAL TRAINING CENTER

VARIATION #3--PROVIDES TIME EQUALIZATION FOR A
4 WEEK EXTENSION OF THE SCHOOL
YEAR WITH 4 HOUR CLASSES*



*Based on time equalization for 170 instructional days.

2. Time in the extended segment.

(a) Number of days in the extended segment	25	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in the 5 week extended segment	6,000	Minutes

3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	25,500	Minutes
(b) Number of minutes of instruction provided in the extended segment	6,000	Minutes
(c) Number of minutes left for time equalization in the regular school year(Sept. to June)	19,500	Minutes
(d) Number of minutes of instruction required per week with time equalization (19,500 minutes ÷ 34 = 574 minutes)	574	Minutes
(e) Number of modules of instruction required per week with time equalization (574 minutes ÷ 15 = 38 modules)	38	Modules

B. <u>Calculations for the P.M. Session(Variation #4)</u>

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year	28,050	Minutes

2. Time in the extended segment.

(a) Number of days in the extended segment	25	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in the 5 week summer segment	6,000	Minutes

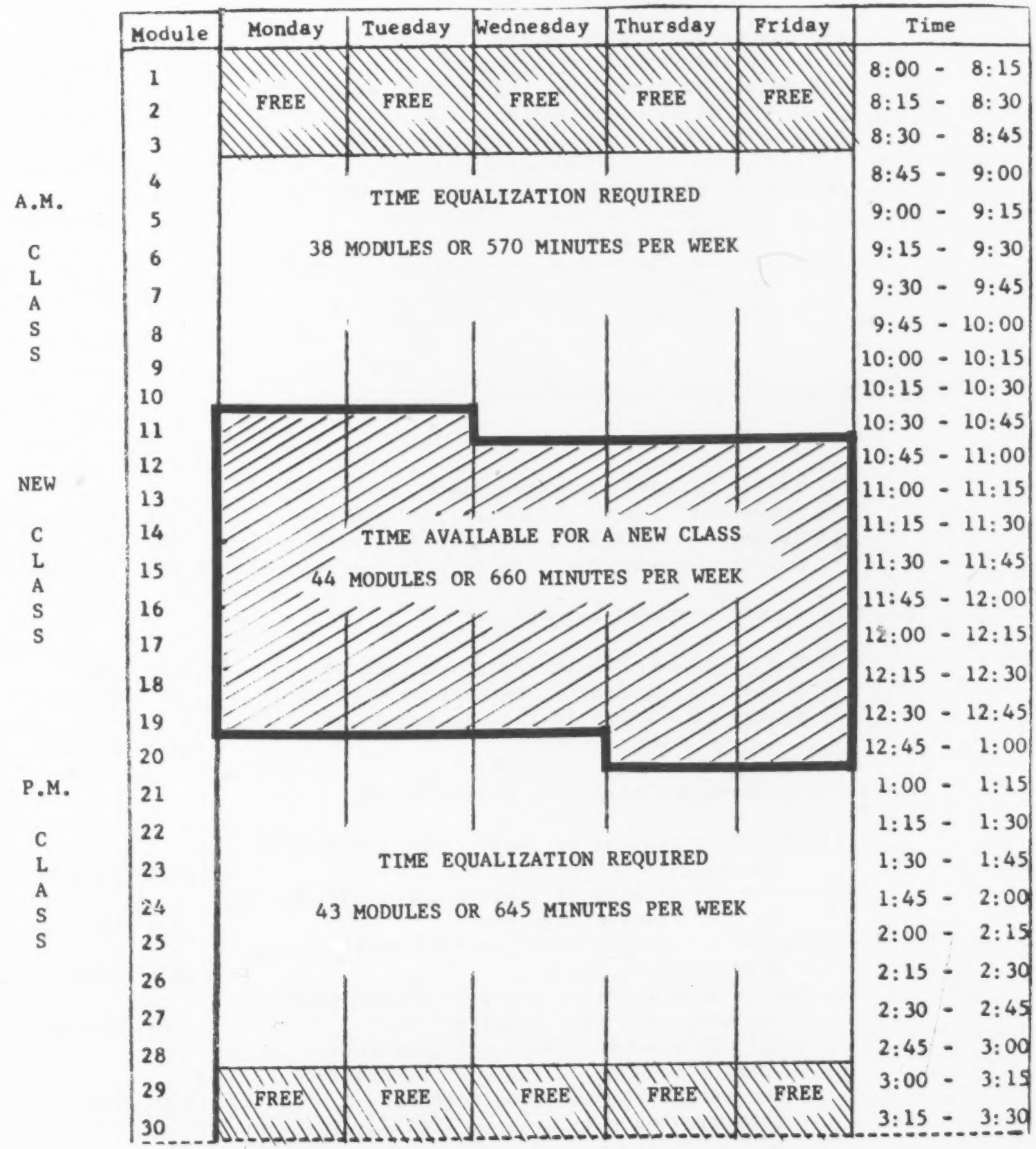
3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	28,050	Minutes
(b) Number of minutes of instruction provided in the extended segment	6,000	Minutes
(c) Number of minutes left for time equalization (September to June)	22,050	Minutes
(d) Number of minutes of instruction required per week with time equalization (22,050 minutes ÷ 34 = 649 minutes)	649	Minutes
(e) Number of modules of instruction required per week with time equalization (649 minutes ÷ 15 minutes = 43 modules)	43	Modules

Figure 8

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER

VARIATION #4--PROVIDES TIME EQUALIZATION FOR A 5 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES*



*Based on time equalization for 170 instructional days.

In variation #4 one finds a new time block which provides more instructional time than is needed to equal the amount of instruction that is provided in the morning or afternoon sessions. In figure 8 the new class time is shown as a free block of 44 modules in the middle of the school day. To provide flexibility the time can be reallocated to provide a longer A.M. session or a different length P.M. session.

Variation #5--Provides Time Equalization for a 6 Week Extension of the School Year with 4 Hour Classes

Figure 9 shows the nature of a rescheduled week with time equalization for a summer segment providing a 6 week extension of time with a 4 hour session.

A. Calculations for the A.M. Session (Variation #5)

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (170 days x 150 minutes = 25,500)	25,500	Minutes

2. Time in the extended segment.

(a) Number of days in the extended segment	30	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in the 6 week extended segment	7,200	Minutes

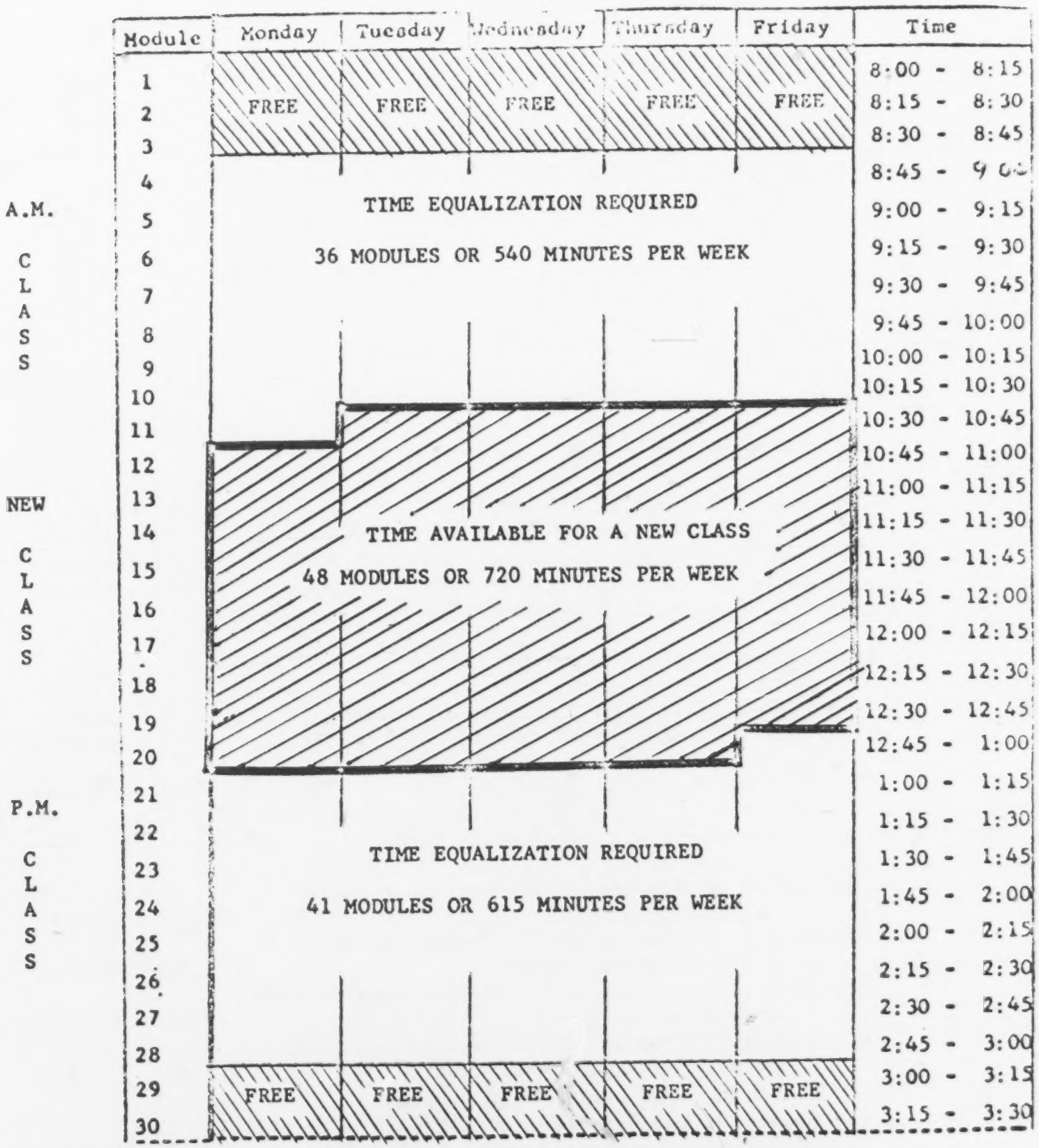
3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	25,500	Minutes
(b) Number of minutes of instruction provided in the extended segment	7,200	Minutes
(c) Number of minutes left for time equalization (September to June)	18,300	Minutes
(d) Number of minutes of instruction required per week with time equalization (18,300 ÷ 34 weeks = 538 minutes)	538	Minutes
(e) Number of modules required per week with time equalization(538 min. ÷ 15 = 36)	36	Modules

Figure 9

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER

VARIATION #5--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES*



*Based on time equalization for 170 instructional days.

B. Calculations for the P.M. Session (Variation #5)

1. Time in the regular school year.

(a) Number of days of instruction	170	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year (170 days x 165 minutes = 28,050)	28,050	Minutes

2. Time in the extended segment.

(a) Number of days in the extended segment	30	Days
(b) Number of minutes of instruction per day	240	Minutes
(c) Number of minutes of instruction in the 6 week summer segment	7,200	Minutes

3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	28,050	Minutes
(b) Number of minutes of instruction provided in the extended segment	7,200	Minutes
(c) Number of minutes left for time equalization (September to June)	20,850	Minutes
(d) Number of minutes of instruction required per week with time equalization (20,850 minutes ÷ 34 weeks = 613)	613	Minutes
(e) Number of modules required per week with time equalization(613 minutes ÷ 15 = 41)	41	Modules

With the adjustments made for the morning and afternoon sessions a new time block is created in the middle of the day which can provide more time than is necessary for time equalization. Therefore, extra modules of time can be shifted to the morning or afternoon sessions to provide additional learning time or to round out opening and closing hours of a designated session.

Variation #6--Provides Time Equalization for 6 Week Extension of the School Year with 4½ Hour Classes

Figure 10 shows the nature of a rescheduled week with time equalization based on a summer segment which provides 8,100 minutes of instruction in a 6 week period of 4½ hour classes.

A. Calculations for the A.M. Session (Variation #6)

1. Time in the regular school year.

(a) Number of days of instruction per year	170	Days
(b) Number of minutes of instruction per day	150	Minutes
(c) Number of minutes of instruction per week	750	Minutes
(d) Number of minutes of instruction per year (170 days x 150 minutes = 25,500)	25,500	Minutes

2. Time in the extended segment.

(a) Number of days in the extended segment	30	Days
(b) Number of minutes of instruction per day	270	Minutes
(c) Number of minutes of instruction provided in the extended segment	8,100	Minutes

3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	25,500	Minutes
(b) Number of minutes of instruction provided in the extended segment	8,100	Minutes
(c) Number of minutes left for time equalization (September to June)	17,400	Minutes
(d) Number of minutes of instruction required per week with time equalization (17,400 minutes ÷ 34 weeks = 512)	512	Minutes
(e) Number of modules required per week with time equalization(512 mins. ÷ 15 = 34)	34	Modules

B. Calculations for the P.M. Session (Variation #6)

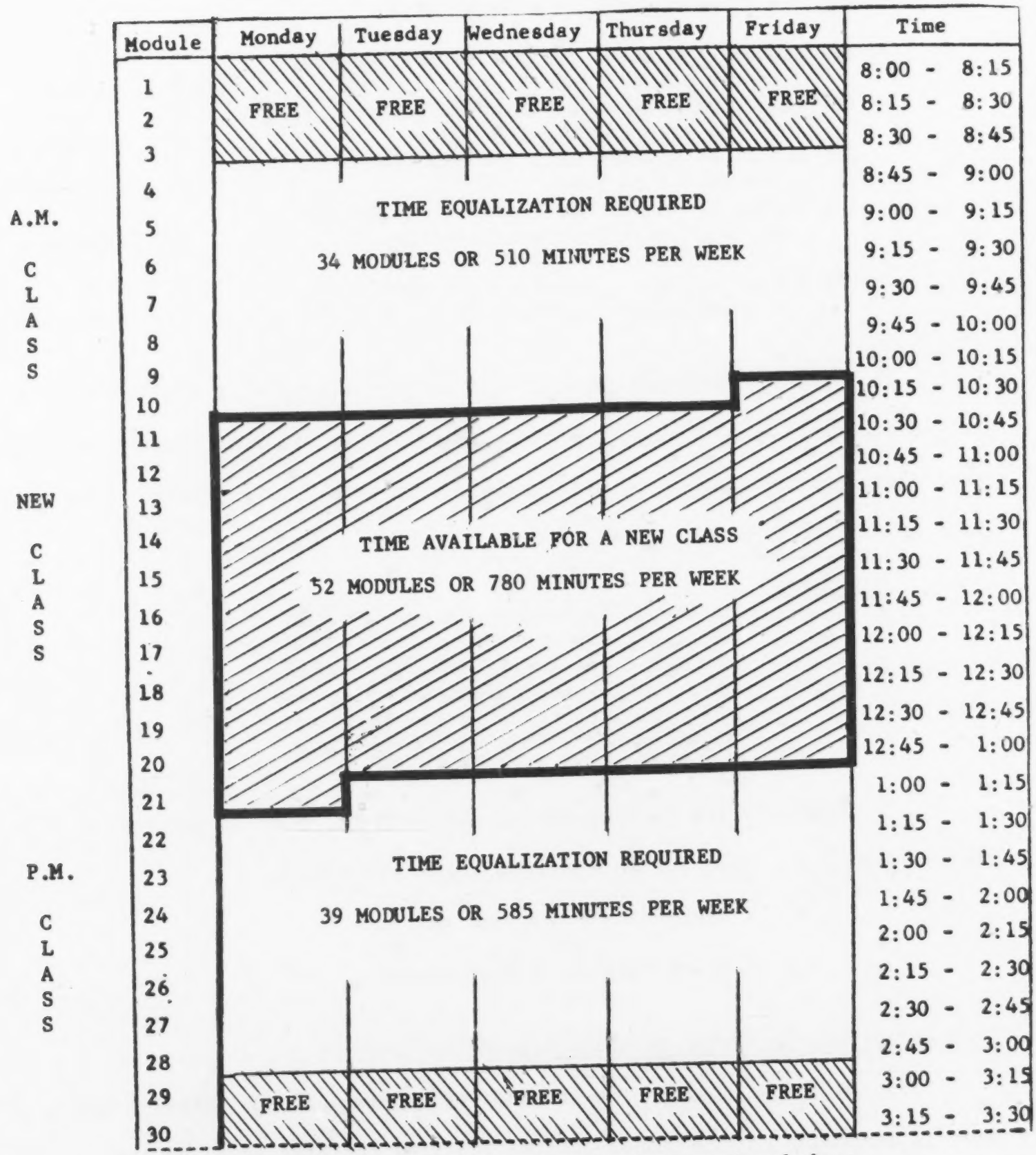
1. Time in the regular school year.

(a) Number of instructional days per year	170	Days
(b) Number of minutes of instruction per day	165	Minutes
(c) Number of minutes of instruction per week	825	Minutes
(d) Number of minutes of instruction per year (170 days x 165 minutes = 28,050)	28,050	Minutes

Figure 10

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER

VARIATION #6--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4½ HOUR CLASSES*



*Based on time equalization for 170 instructional days.

2. Time in the extended segment.

(a) Number of instructional days	30	Days
(b) Number of minutes of instruction per day	270	Minutes
(c) Number of minutes of instruction provided in the extended segment	8,100	Minutes

3. Time requirements with time equalization.

(a) Number of minutes of instruction required in the regular school year	28,050	Minutes
(b) Number of minutes of instruction provided in the extended segment	8,100	Minutes
(c) Number of minutes left for time equalization (September to June)	19,950	Minutes
(d) Number of minutes of instruction required per week with time equalization (19,950 minutes ÷ 34 weeks = 587)	587	Minutes
(e) Number of modules required per week with time equalization(587 mins. ÷ 15 = 39)	39	Modules

The time schedule depicted in figure 10 is somewhat unusual in that it was necessary to introduce 4½ hour classes in the extended segment to free one group of students so they would not have to work beyond the normal June closing of school.

Example:

In the illustration depicted in figure 10 the new class has 52 modules or 780 minutes of instruction a week. Since this provides more instructional time than is currently offered, it is not necessary to extend the school year for this group of students.

In lieu of the 4½ hour day the same effect could be realized through equalizing time for an extended segment providing

a. 7 weeks with 3 3/4 hour classes
or
b. 8 weeks with 3 1/4 hour classes.

Student Attendance in the Extended Segment

The amount of instruction provided or received in the extended segment is dependent on the amount of time required for time equalization.

Many vocational courses do not have a prescribed numer of hours of instruction; therefore, the vocational school directors may elect to modify the length of the class period in the regular or extended school year segment. In some cases students in one or more classes may be excused from attending vocational classes when the regular school closes. This is not the case for variation #6 as depicted in figure 10. Here the assumption is made that students who attended the morning and afternoon sessions will return to the vocational school for a 6, 7, or 8 week period.

In the field trials several of the vocational schools had a different time schedule, therefore, the end result may not be the same as the one shown in figure 10. This is evident in figures 11 and 12. Here time has been provided in the extended segment to equalize standard 52 and 55 modular weekly time allotments.

In this illustration the school day is longer than the one used for variations 1 to 6. Initially, the morning session ran from 7:40 a.m. to 10:15 a.m. while the afternoon session ran from 12:15 p.m. to 3:00 p.m. This left a large block of free time in the middle of the day.

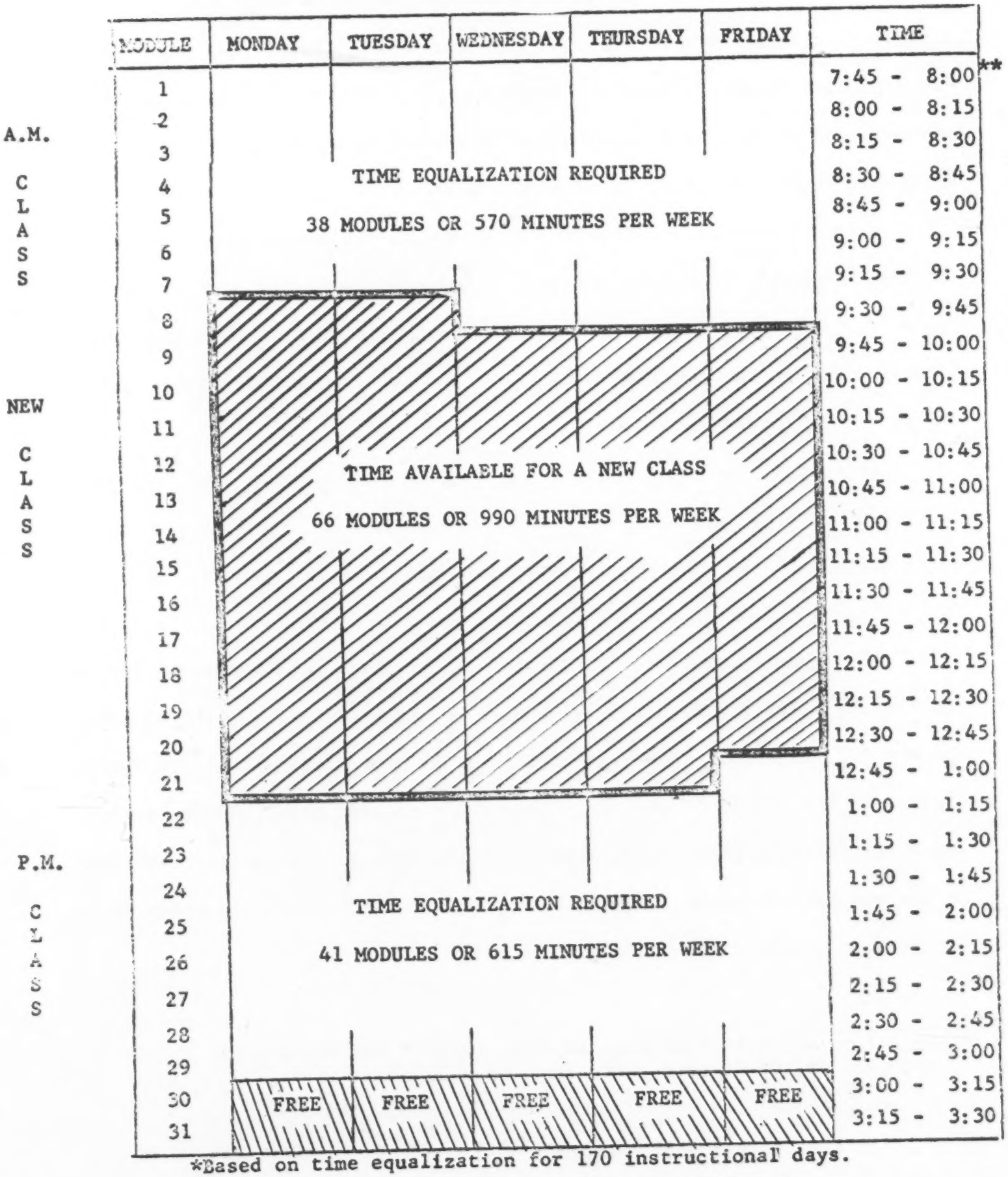
In figure 11, a 6 week extension of time with 4 hour classes showed the time equalization required 38 modules for the A.M. session and 41 modules for the P.M. session. This left 66 modules or 990 minutes available for new classes in the middle of the day. This would provide all students, including girls taking Cosmetology*, with more time than is customarily required in the regular nonextended school year program, therefore, this class would not have to attend class in July or August.

*Cosmetology requires a minimum of 1,000 hours of instruction for licensing purposes or 500 hours a year.

Figure 11

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER

VARIATION #5a--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES*
(PLAN DOESN'T REQUIRE SUMMER EXTENSION FOR ONE CLASS)



*Based on time equalization for 170 instructional days.

**Adjusted opening (7:45 a.m. in lieu of 7:40 a.m.)

Figure 12 shows an adjusted day based on combining the time available in the morning and midday class sessions. The 38 + 66 modules provides a total of 104 modules which when divided makes it possible to offer two sessions throughout the year with 52 modules a week of instruction. This is all the time that is required for the completion of regular vocational courses, therefore, the students in these two segments of the day would not need to attend school beyond normal school closing dates. Students in the third segment of the day would still have to work in July or August to complete normal requirements.

Students in Cosmetology and Nursing would not meet their requirements in sessions providing 41 modules of instruction so the assumption is made that they will work in the sessions providing 52 modules of instruction for 34 weeks and will then complete their requirements in the extended segment.

Example:

Girls taking Cosmetology would have completed 26,520 minutes or 442 hours. In order to complete the required 500 hour minimum, they would have to attend classes in July or August for at least 3 or 4 weeks.

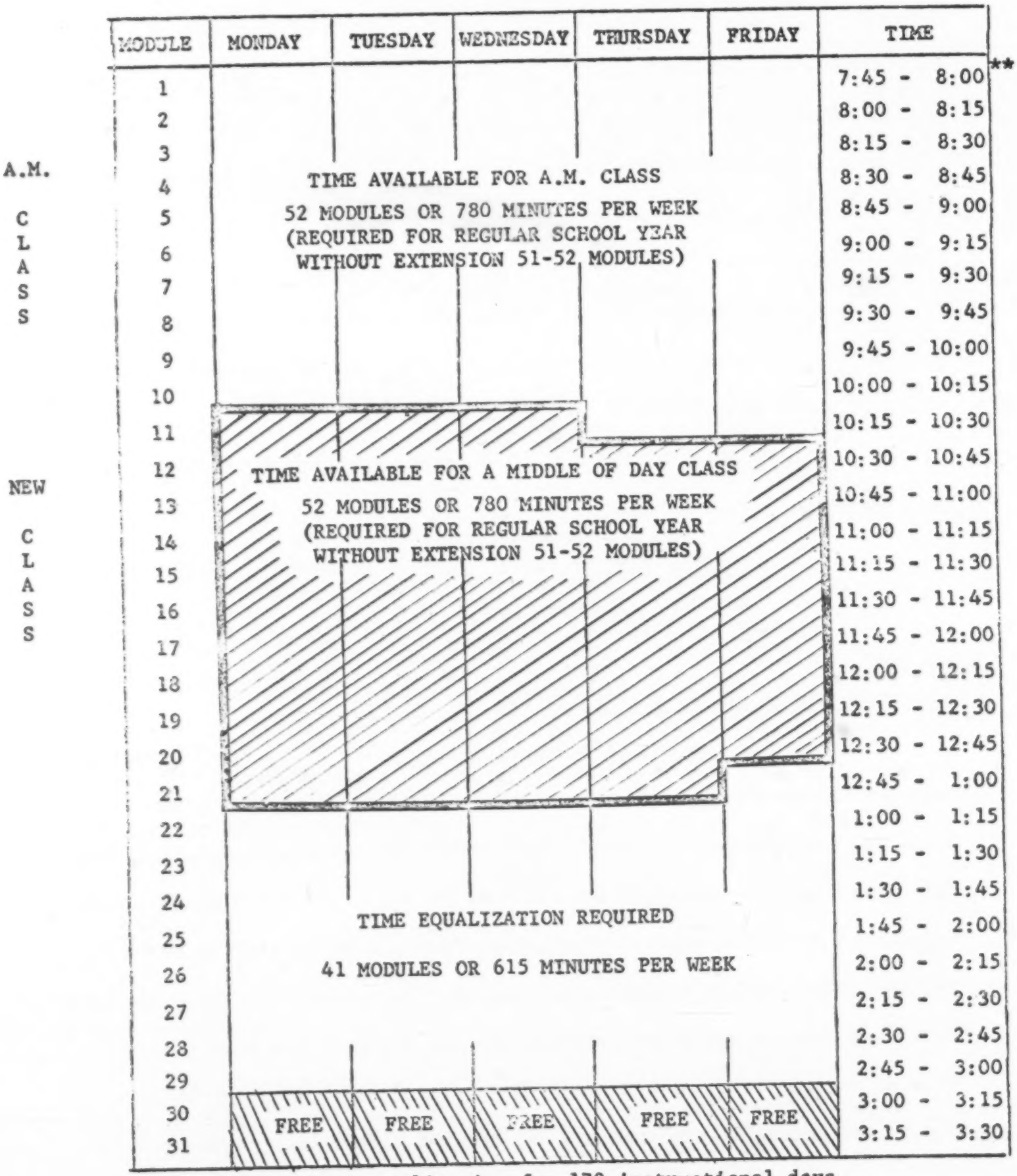
Adjusting the Length of the School Day

In projecting the use of occupational training class facilities the concept of time equalization is generally based on the adoption of a lengthened school year calendar. The actual extension of the school year has determined the nature of the rescheduled day. The field studies have shown that it is not necessary to adjust the opening or closing hours to set the stage for the formation of most new class sessions. However, there have been some occupational training centers where it has been evident that an earlier start of classes or a later dismissal will drastically change the nature of the students day and the flexibility of the school.

Figure 12

PROJECTED USE OF CLASSROOM FACILITIES IN THE
OCCUPATIONAL TRAINING CENTER

VARIATION #5b--PROVIDES TIME EQUALIZATION FOR A
6 WEEK EXTENSION OF THE SCHOOL
YEAR WITH 4 HOUR CLASSES*
(PLAN DOESN'T REQUIRE SUMMER EXTENSION FOR TWO CLASSES)



*Based on time equalization for 170 instructional days.

**Adjusted opening (7:45 a.m. in lieu of 7:40 a.m.)

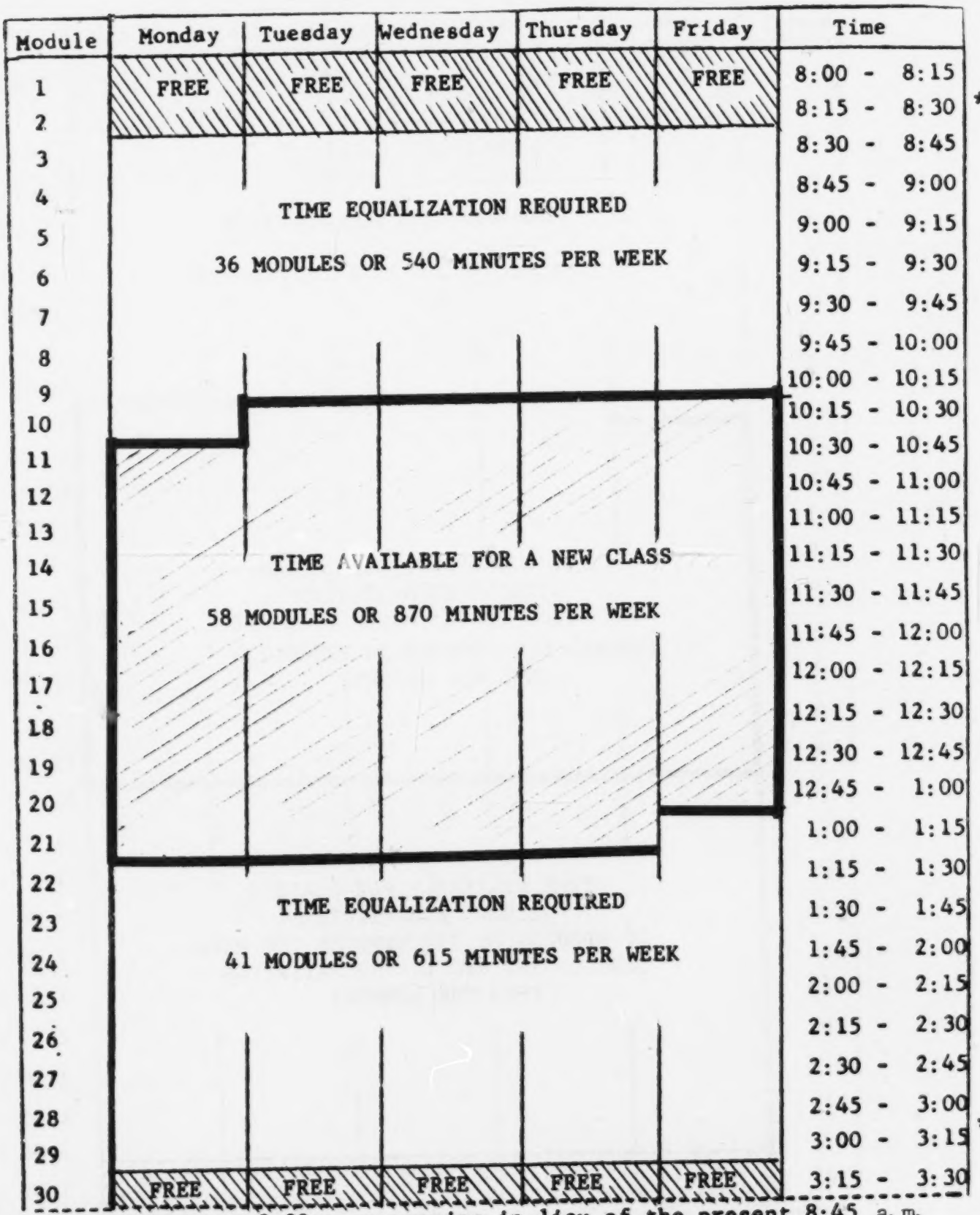
The original time schedule shown in figure 4 called for the start of classes at 8:45 a.m. and an official school closing at 3:00 p.m. With an extension of the school year based upon 6 weeks or schooling with a 4 hour day the morning classes would have required 36 fifteen minute modules of instruction a week while the afternoon classes would have required 41 modules for simple time equalization. Figure 9 shows that the new distribution of instructional time would have opened up a time block which provides a potential 48 modules or 720 minutes. Figures 13 and 14 show what would happen to the schedule if morning classes started and ended 15 minutes (one module) earlier and if afternoon classes ended one module (15 minutes later).

Figure 13 shows a wide open expanse of time in the middle of the day. There is no question about the ability of a class to complete the current time requirements (50 modules) in the middle of the day session. However, both the A.M. pupils would still be expected to work through both the September to June period plus the 6 week extension to complete the prescribed time requirements. Figure 14 shows a combination of the time available in the middle of the day session with that available to the afternoon session students. (58 modules plus 41 modules equal 99 modules) Splitting the available time into 49 and 50 modular time blocks opens the door to two groups of students obtaining the same amount of instructional time provided to most occupational students during the regular school year. If this is acceptable, the two groups of students would not be required to attend classes beyond the regular school closing date. However, it should be noted that the present school schedule for the school shown in figure 4 was based upon a slightly longer afternoon session than the one shown in the morning. No justification was shown for this extra period of time,

but it is assumed that it is an arbitrary time for students other than the Cosmetology pupils, therefore the completion of a potential 50 modules of instruction in the middle of the day and afternoon sessions will be deemed sufficient. If it isn't, the students in the original afternoon segment may be asked to continue working until they make up the 5 module deficiency. This could be done in 11 extra days instead of 30 extra days.

Figure 13

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER WITH AN ADJUSTMENT OF OPENING AND CLOSING HOURS



*Represents an 8:30 a.m. opening in lieu of the present 8:45 a.m. opening.

**Represents a 3:15 p.m. closing in lieu of the present 3:00 p.m. dismissal.

Figure 14

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER WITH A RESCHEDULED DAY FOLLOWING THE ADJUSTED OPENING AND CLOSING HOURS

Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15 *
2						8:15 - 8:30
3						8:30 - 8:45
4						8:45 - 9:00
5	TIME EQUALIZATION REQUIRED					9:00 - 9:15
6	36 MODULES OR 540 MINUTES PER WEEK					9:15 - 9:30
7						9:30 - 9:45
8						9:45 - 10:00
9						10:00 - 10:15
10						10:15 - 10:30
11						10:30 - 10:45
12						10:45 - 11:00
13						11:00 - 11:15
14	TIME AVAILABLE FOR CLASSES					11:15 - 11:30
15	WITHOUT EQUALIZATION					11:30 - 11:45
16	49 MODULES OR 735 MINUTES PER WEEK					11:45 - 12:00
17	(SHOULD NOT REQUIRE AN EXTENSION INTO THE SUMMER)					12:00 - 12:15
18						12:15 - 12:30
19						12:30 - 12:45
20						12:45 - 1:00
21						1:00 - 1:15
22	TIME AVAILABLE FOR CLASSES					1:15 - 1:30
23	WITHOUT EQUALIZATION					1:30 - 1:45
24	50 MODULES OR 750 MINUTES PER WEEK					1:45 - 2:00
25	(SHOULD NOT REQUIRE AN EXTENSION INTO THE SUMMER)					2:00 - 2:15
26						2:15 - 2:30
27						2:30 - 2:45
28						2:45 - 3:00
29						3:00 - 3:15 **
30	FREE	FREE	FREE	FREE	FREE	3:15 - 3:30

*Represents an 8:30 a.m. opening in lieu of the present 8:45 a.m. opening.

**Represents a 3:15 p.m. closing in lieu of the present 3:00 p.m. dismissal.

CHAPTER IV

THE MULTIPLE SESSION WEEK

The Nature of Proposal No. 2

This approach to the Multiple Trails ESY Continuous Learning Year will release space through the use of the same time equalization principles established to release the large blocks of time shown in the Multiple Session Day patterns. The new proposal differs from the first in that it calls for a reassignment of the instructional time into two, three, or four learning time blocks for both the morning and afternoon sessions, thereby releasing one or more full morning or afternoon sessions for new classes.

> In the new ESY plan students earn the same amount of instructional time in the new three day program that would be earned in the Multiple Session Day program calling for attendance five days a week. It is all a matter of rearranging the time blocks in terms of the time required for equalization purposes.

Once again, the time provided in the new time blocks depends upon the length of the current class sessions and the amount of time earned in an extended segment. Proposal no. 2 requires a rescheduling of the student's week in such a way that individuals no longer have to leave their home school every day. Less time is spent on traveling from sending school to receiving school and back. Since students repeatedly find it difficult to fit two programs into a full, but short day schedule, the saving of transportation time may be considered as an asset. Again, students may work in longer time blocks which should result in greater productivity in the occupational training class. While there are other advantages to the multiple session week, the obstacle of inflexible school schedules is a barrier which will have to be overcome if this ESY plan is to be imple-

mented on any large scale.

The possibility of releasing classroom space and concurrently reducing tuition costs is the issue which must be faced honestly and directly. If these are realistic goals, it is time to consider whether the complexity of student scheduling should be the determining factor which increases school costs or which bars students from working in an occupational training program that can lead to a career and ultimate self-sufficiency. The Multiple Session Week Plan merely uses time equalization principles to reduce the number of days that boys and girls have to attend classes in an occupational training center. This opens the door for the entry of new students into the program since the first groups of students are back in their home schools or are in work experience programs.

Variations of Weekly Time Patterns That Can Be Developed With Different Time Equalization Requirements

Present Use of Classroom Space in Occupational Training Center M

Occupational training center M maintains a program for two sets of students. The morning groups attend class from 8:45 a.m. to 11:15 a.m. Figure 15 shows that the classrooms are not used for an hour (four 15 minute modules per day). The afternoon classes begin at 12:15 p.m. and terminate at 2:45 p.m. In this learning center occupational training students receive 2½ hours of instruction daily for a total of 50 fifteen minute modules a week or 750 minutes.

Training center M , like many others, holds classes 5 hours a day, 25 hours a week or 850 to 900 hours per year. In view of the vast amount of expensive equipment used for training purposes one has a right to ask whether it is possible to increase the return received on the dollars in-

vested in plant, equipment, and personnel. A rescheduled school year shows that this can be done if educators want to make the effort.

Projected Use of Occupational Training M with the Multiple Session Week Variation: #1

One plan for increasing school plant capacity requires an extension of the school year calendar. This is not a mere summer school program, but a lengthening of the school year with an attempt to reschedule student time over the new educational time line. Figure 16 shows one variation of the Multiple Session Week in a Continuous Learning Year Plan. A comparison of the current weekly time schedule shown in figure 15 with the new one in figure 16 shows two large blocks of time becomes available for potential new students.

The new learning time blocks are the by-product of a 6 week extension of the school calendar. The addition of a 6 week summer segment with 4 hour classes provides students with enough "E" time to reduce the number of minutes of required instructional time between September through June to 36 fifteen minute modules. This reduction from 50 to 36 modules makes it possible to reschedule the regular morning and afternoon classes so students will be released from class two days out of five. In variation #1 the morning session classes are shown attending classes Monday, Tuesday, and Wednesday.

Similarly, current afternoon classes are scheduled so students can meet their time equalization requirements by attending classes on Wednesday, Thursday, and Friday afternoons. Classroom space is now available for new groups of students on Thursday and Friday morning as well as on Monday and Tuesday afternoons.

Figure 15

PRESENT USE OF THE OCCUPATIONAL TRAINING FACILITIES
(SEPTEMBER THROUGH JUNE)

SCHOOL M

Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
2						8:15 - 8:30
3						8:30 - 8:45
4	INSTRUCTION PROVIDED IN THE A.M.					8:45 - 9:00
5						9:00 - 9:15
6	50 MODULES OR 750 MINUTES PER WEEK					9:15 - 9:30
7						9:30 - 9:45
8						9:45 - 10:00
9						10:00 - 10:15
10						10:15 - 10:30
11						10:30 - 10:45
12						10:45 - 11:00
13						11:00 - 11:15
14	NONSCHEDULE TIME					11:15 - 11:30
15	4 MODULES A DAY, 20 MODULES OR					11:30 - 11:45
16	300 MINUTES PER WEEK					11:45 - 12:00
17						12:00 - 12:15
18						12:15 - 12:30
19						12:30 - 12:45
20						12:45 - 1:00
21						1:00 - 1:15
22						1:15 - 1:30
23	INSTRUCTION PROVIDED IN THE P.M.					1:30 - 1:45
24	50 MODULES OR 750 MINUTES PER WEEK					1:45 - 2:00
25						2:00 - 2:15
26						2:15 - 2:30
27						2:30 - 2:45
28	FREE	FREE	FREE	FREE	FREE	2:45 - 3:00
29						3:00 - 3:15
30						3:15 - 3:30

Calculation:

1. Number of minutes of instruction provided per week in the regular school year

2. Number of minutes of instruction provided per year in the regular school year

3. Number of minutes of instruction provided in the 6 week summer segment with 4 hour classes
   (30 days x 240 minutes)

4. Number of minutes of instructional time left for time equalization purposes during the regular school year
   (25,500 min. less 7,200 min.)

5. Number of minutes of instruction required per week for time equalization
   (18,300 minutes divided by 34 weeks)

6. Number of modules required per week with time equalization
   (538 minutes divided by 15 min.)

There are various ways to use the free time shown in figure 16. If the morning session time is not combined with the afternoon session time, it is not possible to provide students entering into the program with the same amount of instruction they would normally have received. This means they may have to work through a 3 year program instead of 2, engage in a distinctly modified program or use the time for exploratory purposes. However, if sending schools can provide a flexible schedule, the students may work in their occupational training classes two afternoons and two mornings. In this schedule a third class could be organized which receives the equivalent of 48 modules or 720 minutes of instruction a week between September and June or slightly less than current students receive when they attend classes 5 days a week. Other patterns of school organization can be developed. One which has been considered favorably by some BOCES directors calls for a restructured work schedule to insure that two full days are reserved for new students. This would be a simple task with

Figure 16

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES
IN SCHOOL M

VARIATION #1--PROVIDES TIME EQUALIZATION FOR A
6 WEEK EXTENSION OF THE SCHOOL
YEAR WITH 4 HOUR CLASSES

Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
2						8:15 - 8:30
3						8:30 - 8:45
4	TIME EQUALIZATION REQUIRED FOR CURRENT A.M. CLASSES 36 MODULES OR 540 MINUTES PER WEEK			TIME AVAILABLE FOR A NEW CLASS 24 MODULES OR 360 MINUTES PER WEEK		8:45 - 9:00
5						9:00 - 9:15
6						9:15 - 9:30
7						9:30 - 9:45
8						9:45 - 10:00
9						10:00 - 10:15
10						10:15 - 10:30
11						10:30 - 10:45
12						10:45 - 11:00
13						11:00 - 11:15
14						11:15 - 11:30
15						11:30 - 11:45
16	TIME AVAILABLE FOR A NEW CLASS 24 MODULES OR 360 MINUTES PER WEEK			TIME EQUALIZATION REQUIRED FOR CURRENT P.M. CLASSES 36 MODULES OR 540 MINUTES PER WEEK		11:45 - 12:00
17						12:00 - 12:15
18						12:15 - 12:30
19						12:30 - 12:45
20						12:45 - 1:00
21						1:00 - 1:15
22						1:15 - 1:30
23						1:30 - 1:45
24						1:45 - 2:00
25						2:00 - 2:15
26						2:15 - 2:30
27						2:30 - 2:45
28	FREE	FREE	FREE	FREE	FREE	2:45 - 3:00
29						3:00 - 3:15
30						3:15 - 3:30

the pattern shown in figure 16 since all that would be required is a shifting of days.

The Adjusted Opening and Closing Time

Very few occupational training centers have their own buses. As a result their students frequently arrive late or leave early. The excuse given, of course, is the complexity of sending school bus schedules.

> Field studies showed a considerable loss of time may be expected in many of the occupational training centers due to the over dependence upon the vagaries of 15 or 20 or more sending district bus schedules. In one occupational training center classes were deliberately delayed 30 minutes because bus loads of students generally arrived 20 to 30 minutes after all of the other buses had discharged their passengers. The early arrivals sat around doing nothing. The instructors made no attempt to get anything started that could be considered purposeful.
>
> A suggestion was made to ignore the late bus arrivals by letting classes start when they were originally scheduled to start. Since many of the students had specific responsibilities related to unfinished projects instructors were told individual students should be allowed to begin work as soon as they arrived. They could give attention to the students on an individual or small group basis which isn't possible when the entire class is started as an entire unit.

School M had one of these complicated bus schedules. At first the director didn't see how adjustments could be made in his schedule, however, a bit of study showed that a 15 minute adjustment in the opening and closing hours was worth considering because of the potential flexibility such a change would make if the extended school year plan ever became feasible. Figure 18 shows what happens when the opening hour is set at 8:30 a.m. instead of 8:45 a.m. The afternoon session was adjusted by terminating classes at 3:00 p.m. instead of 2:45 p.m. If one compares the schedules shown in figure 17 with those in figure 16 it becomes apparent that the new schedule provides a degree of flexibility in the middle of

Figure 17

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES IN SCHOOL M

VARIATION #1a--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES AND AN ADJUSTED OPENING AND CLOSING

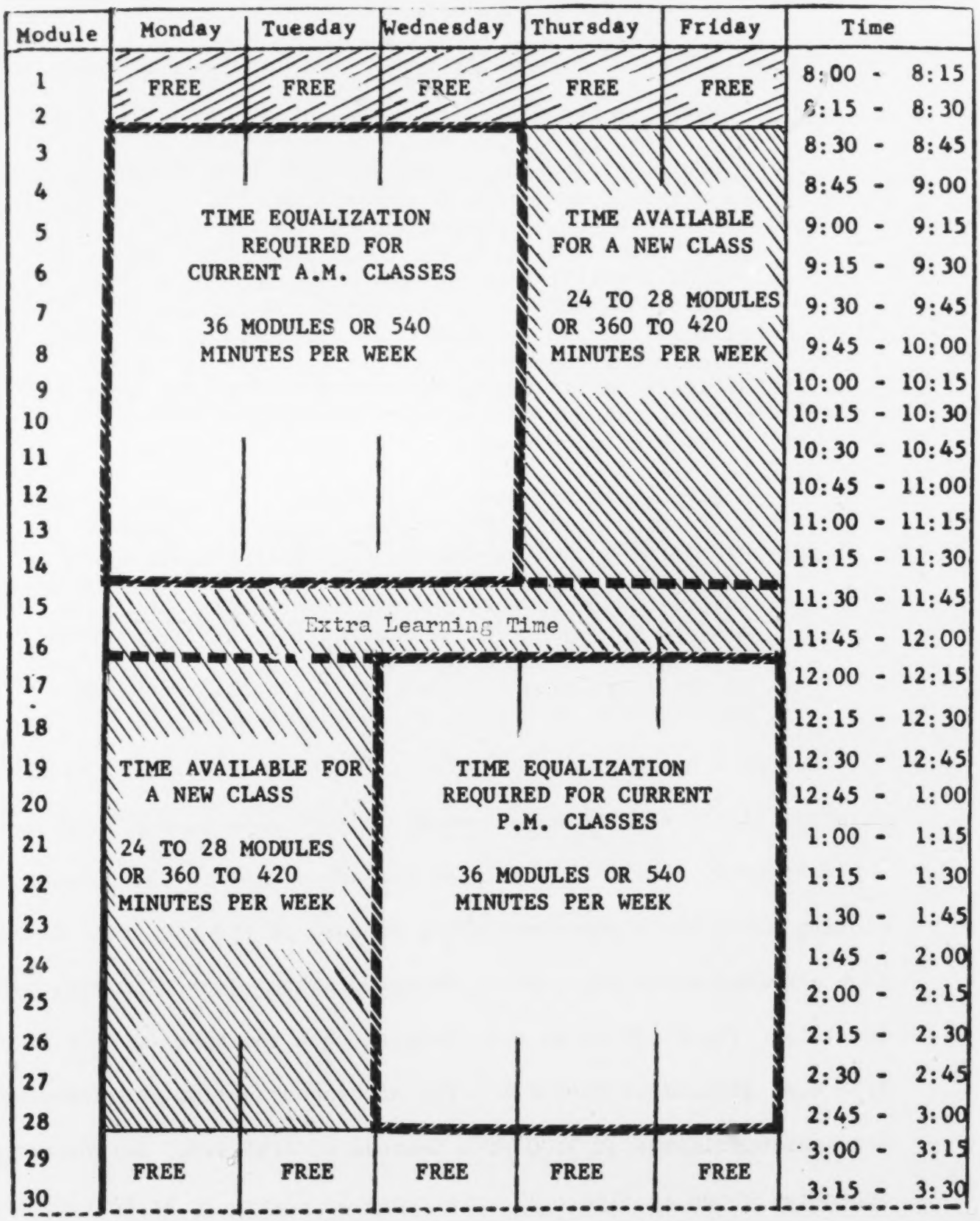
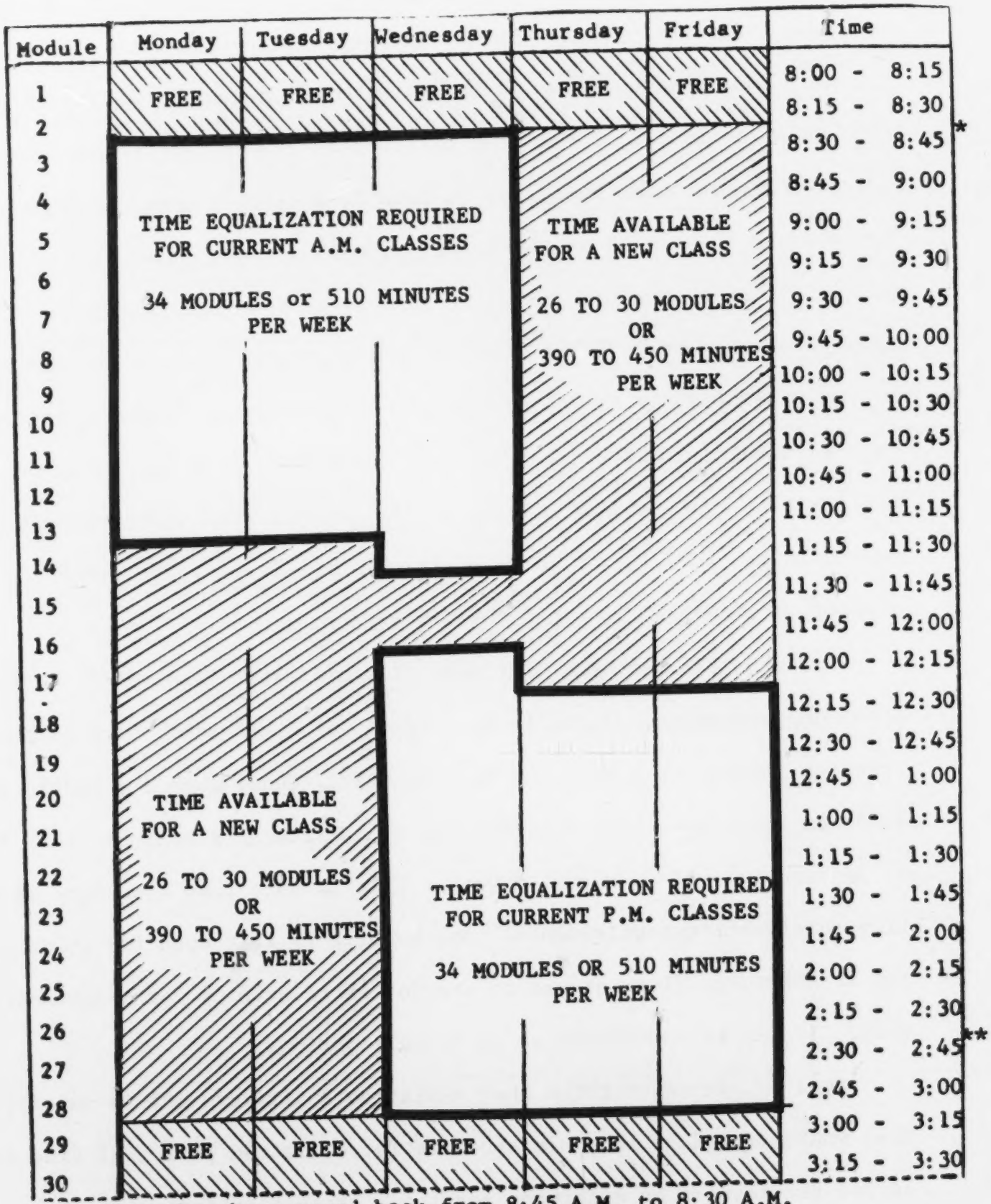

Module
Monday
Tuesday
Wednesday
Thursday
Friday
Time
FREE
TIME EQUALIZATION REQUIRED FOR CURRENT A.M. CLASSES
36 MODULES OR 540 MINUTES PER WEEK
TIME AVAILABLE FOR A NEW CLASS
24 TO 28 MODULES OR 360 TO 420 MINUTES PER WEEK
Extra Learning Time
TIME AVAILABLE FOR A NEW CLASS
24 TO 28 MODULES OR 360 TO 420 MINUTES PER WEEK
TIME EQUALIZATION REQUIRED FOR CURRENT P.M. CLASSES
36 MODULES OR 540 MINUTES PER WEEK
FREE
1 8:00 - 8:15
2 8:15 - 8:30
3 8:30 - 8:45
4 8:45 - 9:00
5 9:00 - 9:15
6 9:15 - 9:30
7 9:30 - 9:45
8 9:45 - 10:00
9 10:00 - 10:15
10 10:15 - 10:30
11 10:30 - 10:45
12 10:45 - 11:00
13 11:00 - 11:15
14 11:15 - 11:30
15 11:30 - 11:45
16 11:45 - 12:00
17 12:00 - 12:15
18 12:15 - 12:30
19 12:30 - 12:45
20 12:45 - 1:00
21 1:00 - 1:15
22 1:15 - 1:30
23 1:30 - 1:45
24 1:45 - 2:00
25 2:00 - 2:15
26 2:15 - 2:30
27 2:30 - 2:45
28 2:45 - 3:00
29 3:00 - 3:15
30 3:15 - 3:30

Figure 18

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES IN SCHOOL M

VARIATION #2a--PROVIDES TIME EQUALIZATION THROUGH A 7 WEEK, 4 HOUR A DAY SESSION AND AN ADJUSTED OPENING AND CLOSING



*Opening has been moved back from 8:45 A.M. to 8:30 A.M.
**Closing has been moved up from 2:45 P.M. to 3:00 P.M.

the day that isn't present in the earlier schedule. For example, the free modules could be used to provide a lunch period for instructor and students.

Increased Flexibility Can Be Provided by Adding Another Week to the Summer Extension

The flexibility of a schedule increases with each hour of time added to the summer extension and decreases with the reduction in the length of the summer schedule. The latter will become evident in the discussion in subsequent pages when reference is made to mini-programs. In School M an increase in the length of the summer extension from 6 weeks to 7 weeks reduces the amount of time required for time equalization purposes from 36 modules to 34. This can be seen in figure 18. On the surface all of the free time may not be needed, yet it is there. Students in the regular morning or afternoon sessions can readily meet the new time requirements by attending classes in the occupational training center 3 days a week. This leaves large blocks of time free on the remaining morning or afternoon sessions for new students.

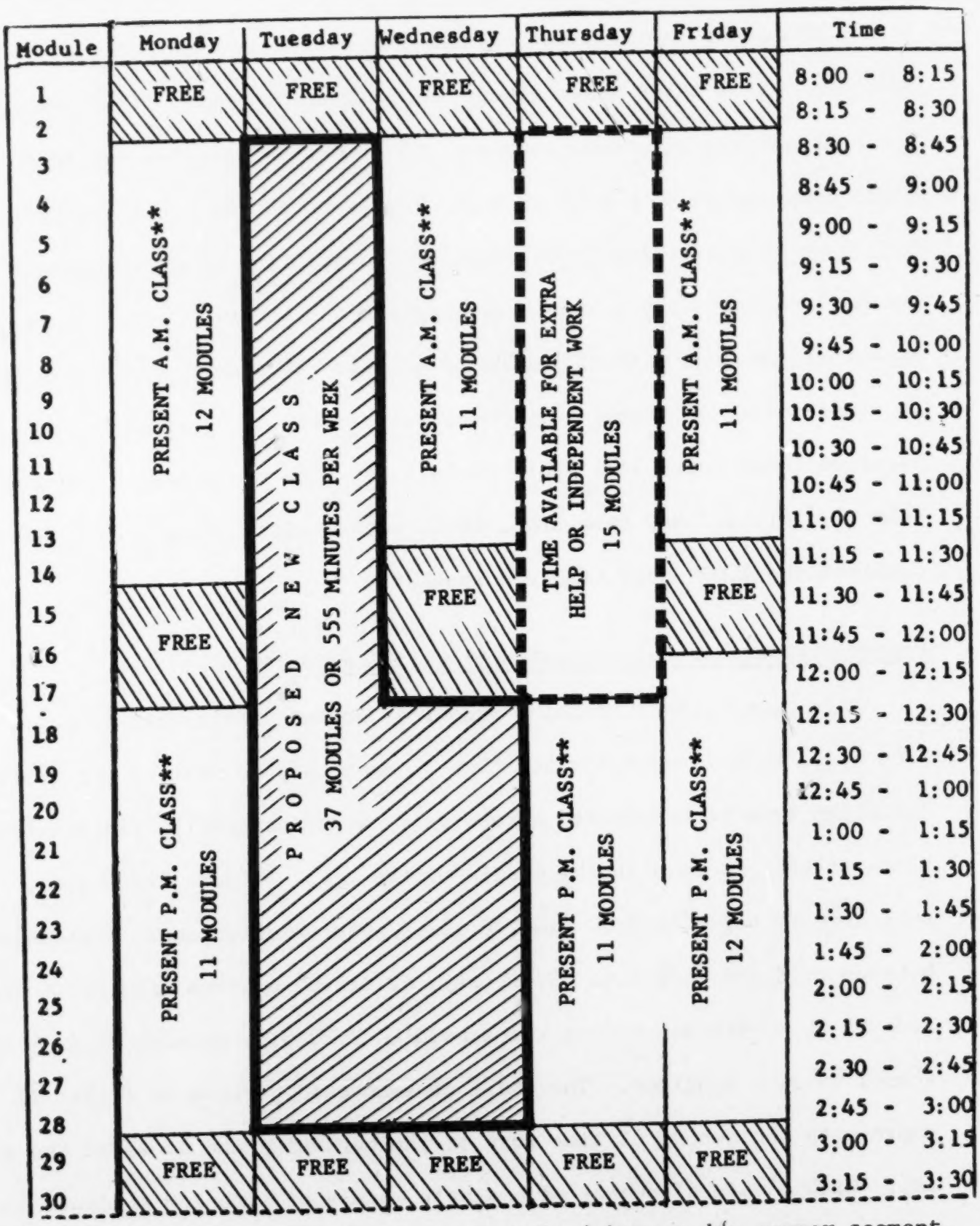
How this time is used will vary with different leadership. Figure 19 shows one variation. It calls for a group of students to work in the training center for a full day and one half. Under such a schedule the students would have little difficulty in completing a minimum of 37 modules or 555 minutes of classwork a week. This is more than necessary to meet time equalization requirements. One morning is left open for students from any of the three class groups to use for extra help or for independent work. It may be considered as an on call period.

Some people might think that variation 2b (figure 19) is unrealistic. They would prefer to schedule students for a limited period of time in either the morning or afternoon session. If this is done, one might say

Figure 19

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES
IN CENTER M

VARIATION #2b PROVIDES SPACE FOR A NEW GROUP OF STUDENTS WHO CAN BE SCHEDULED AWAY FROM THE HOME SCHOOL FOR 1½ DAYS*



*Based on time equalization for a 7 week, 4 hour a day summer segment.
**Present A.M. and P.M. class receives 34 modules or 510 minutes per week.

that the increase in space utilization has gone beyond 50 percent. The sending schools are accustomed to having students attend classes at the occupational training center for five mornings or five afternoons, but none of the schools visited had a schedule which allowed an interchange of sessions during the week. A variation of this suggestion is shown in figure 20. Here one out of three class groups is assigned to attend two morning sessions and two afternoon sessions. With such a schedule the students could complete as much work as most classes do in the regular school year. The 50 modules of instruction provided in variation 2c would allow most occupational training students to complete their basic courses between September and June without having to go into the summer extension. Students in classes such as Cosmetology who are currently struggling to complete a required 1,000 hours in 2 years could go on into the summer under such a schedule, or, if they have time, could work a little longer each day to complete the 1,000 hour time requirement.

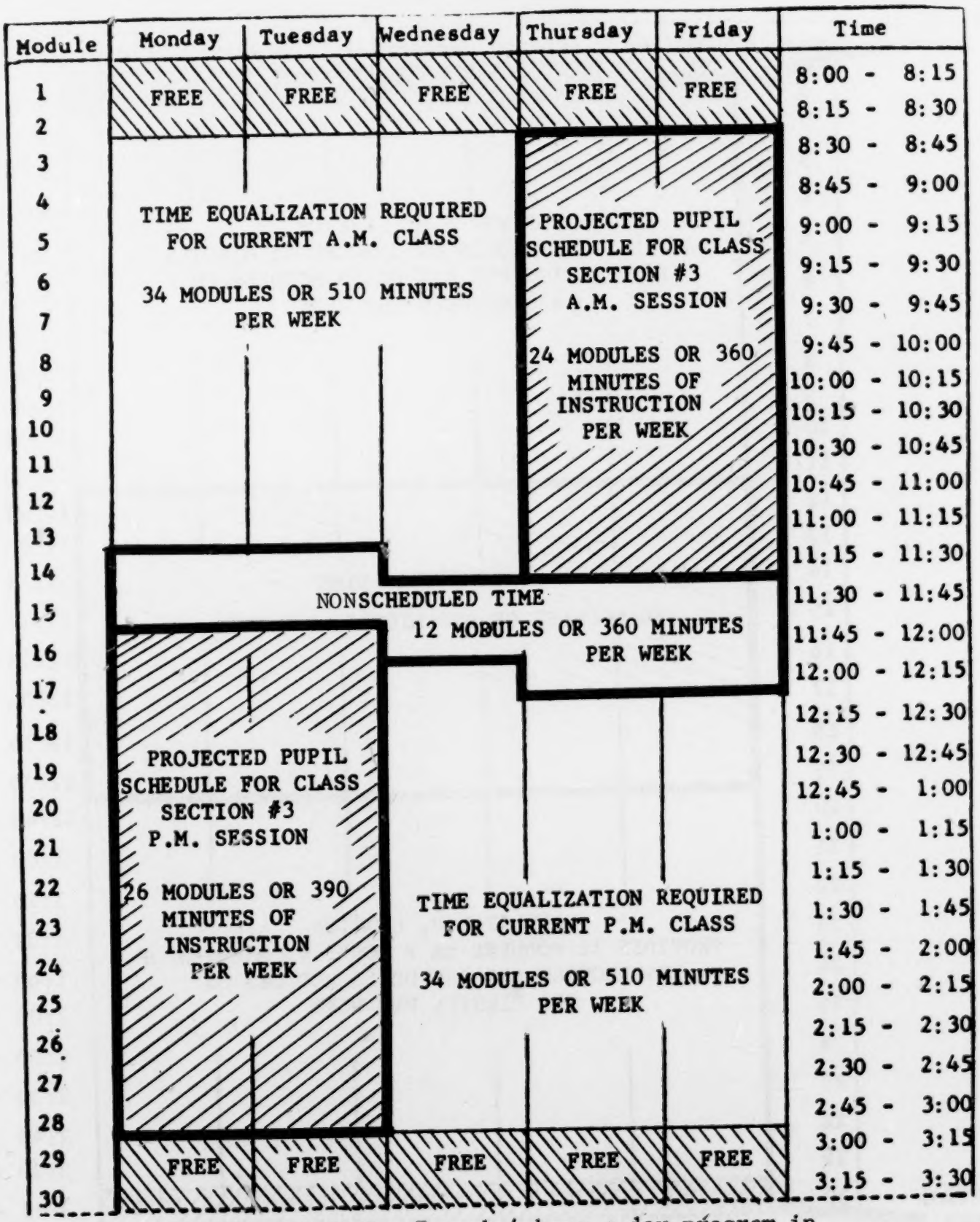
Program Variations for Occupational Training Center R

This occupational training school is normally scheduled to start at 8:00 a.m. This is much earlier than is customary in most of the centers and might even be considered excessively early, especially since a large block of time is open in the middle of the day. (figure 21) While scheduled to begin at 8:00 a.m., classes never started until somewhere between 8:15 and 8:30 a.m. Similarly, afternoon classes were terminated from 15 to 30 minutes before the scheduled 3:30 p.m. closing because of school bussing problems. The small crosshatched portion of figure 21 represents the amount of time lost at the beginning and close of the school day. With a mere allowance of a single module of time for students in each class session there would be increased flexibility; there are, however,

Figure 20

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES
IN SCHOOL M

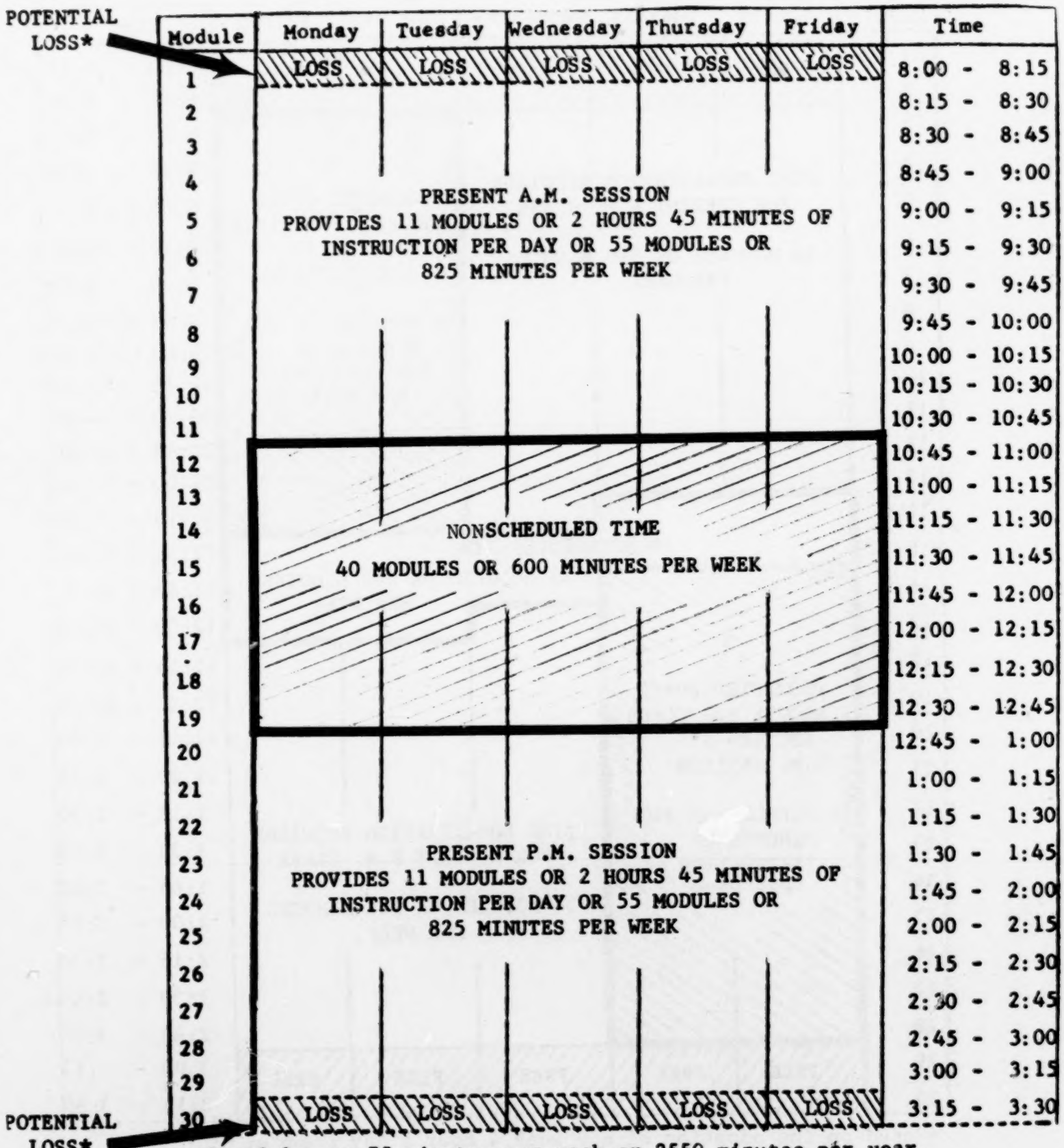
VARIATION #2c --PROVIDES TIME EQUALIZATION FOR A
THIRD CLASS SESSION WITHIN CONFINES
OF THE REGULAR SEPTEMBER TO JUNE
SCHOOL CALENDAR*



*Based on the adoption of a 7 week, 4 hour a day program in the summer.

Figure 21

PRESENT USE OF CLASSROOM SPACE IN
OCCUPATIONAL TRAINING CENTER R



*5 modules or 75 minutes per week or 2,550 minutes per year.

some individuals who shrug their shoulders and say: "So What!" A loss of 15 minutes isn't much until it is repeated every day for 170 to 180 days. Then it represents a cumulative loss of approximately 2,550 minutes a year.

Knowledge of a discrepancy between stated opening and closing hours and daily practice leads one to ask which time schedule should be used to establish time equalization principles. The difference of a single module is shown in the following:

a. If the regularly scheduled hours, 8:00 a.m. to 3:30 p.m. are used to establish the time equalization base, a 6 week extension of the school year with 4 hour classes will lend itself to a new ESY program requiring 41 modules or 615 minutes of instruction per week.

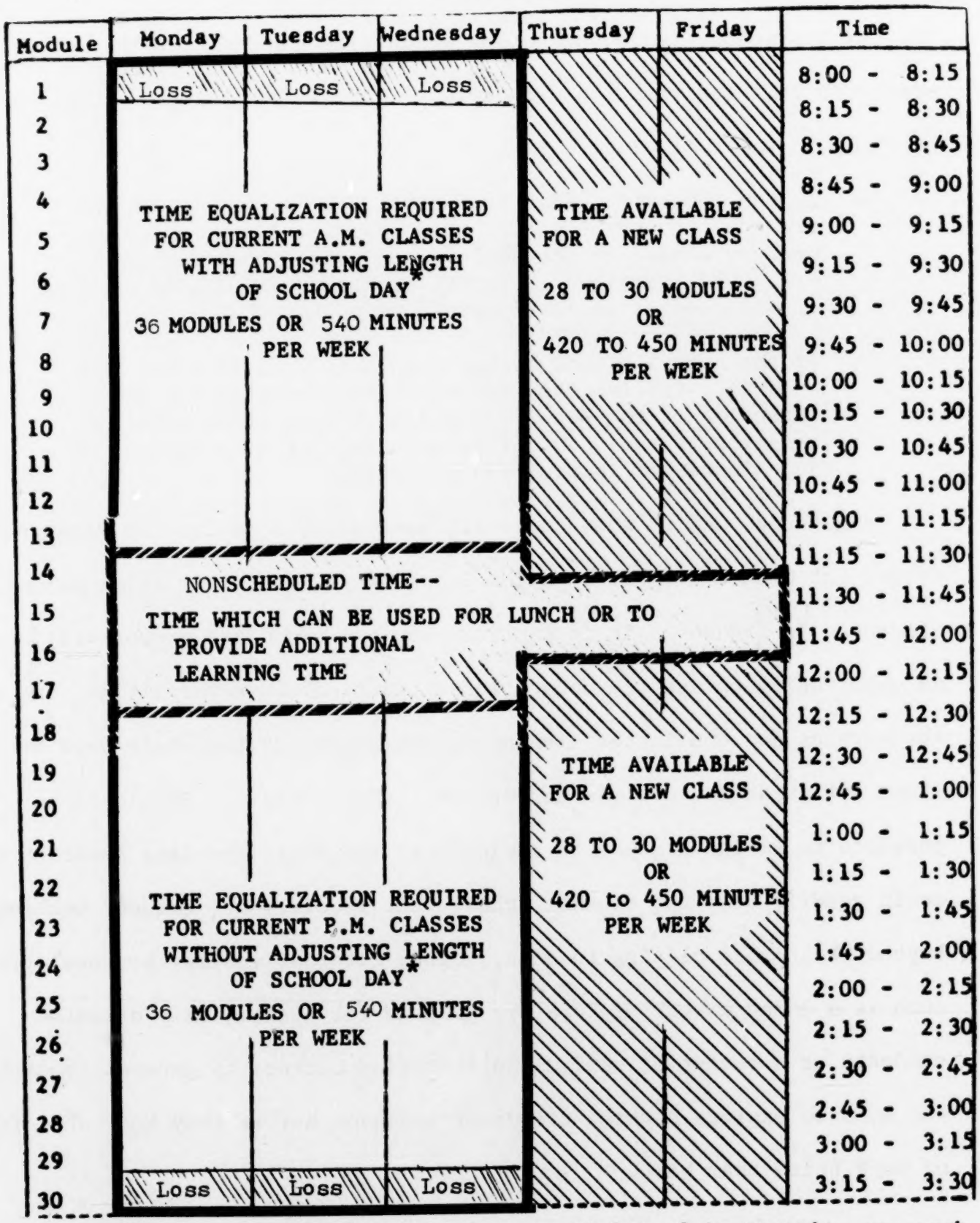
b. If the actual school hours, 8:15 a.m. to 3:15 p.m., are used to establish the time equalization base, a 6 week extension of the school year with 4 hour classes will lend itself to a new ESY program requiring 36 modules or 540 minutes of instruction per week.

Figures 22 and 23 show these differences in equalization time requirements, but with a slight variation in the way time is set aside for new classes. In figure 22 it is implied that two new class groups will have an opportunity to use the occupational training class facilities, one in the morning and one in the afternoon. In figure 23 two whole days are shown set aside for new classes or for a single class. Should it be possible to assign a group of students to two full day class sessions they could readily meet the regular school year requirements without working beyond the normal closing in June. Other alternatives may be considered such as a 1 day a week exploratory program for academically oriented students or a series of half day orientation classes to general students who need to explore several fields of endeavor before they know what field of work suits them best.

Figure 22

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES IN SCHOOL R

VARIATION #1b--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WTTH 4 HOUR CLASSES IN A SCHOOL WITH AN EARLIER OPENING AND LATER CLOSING THAN THAT OF SCHOOL M

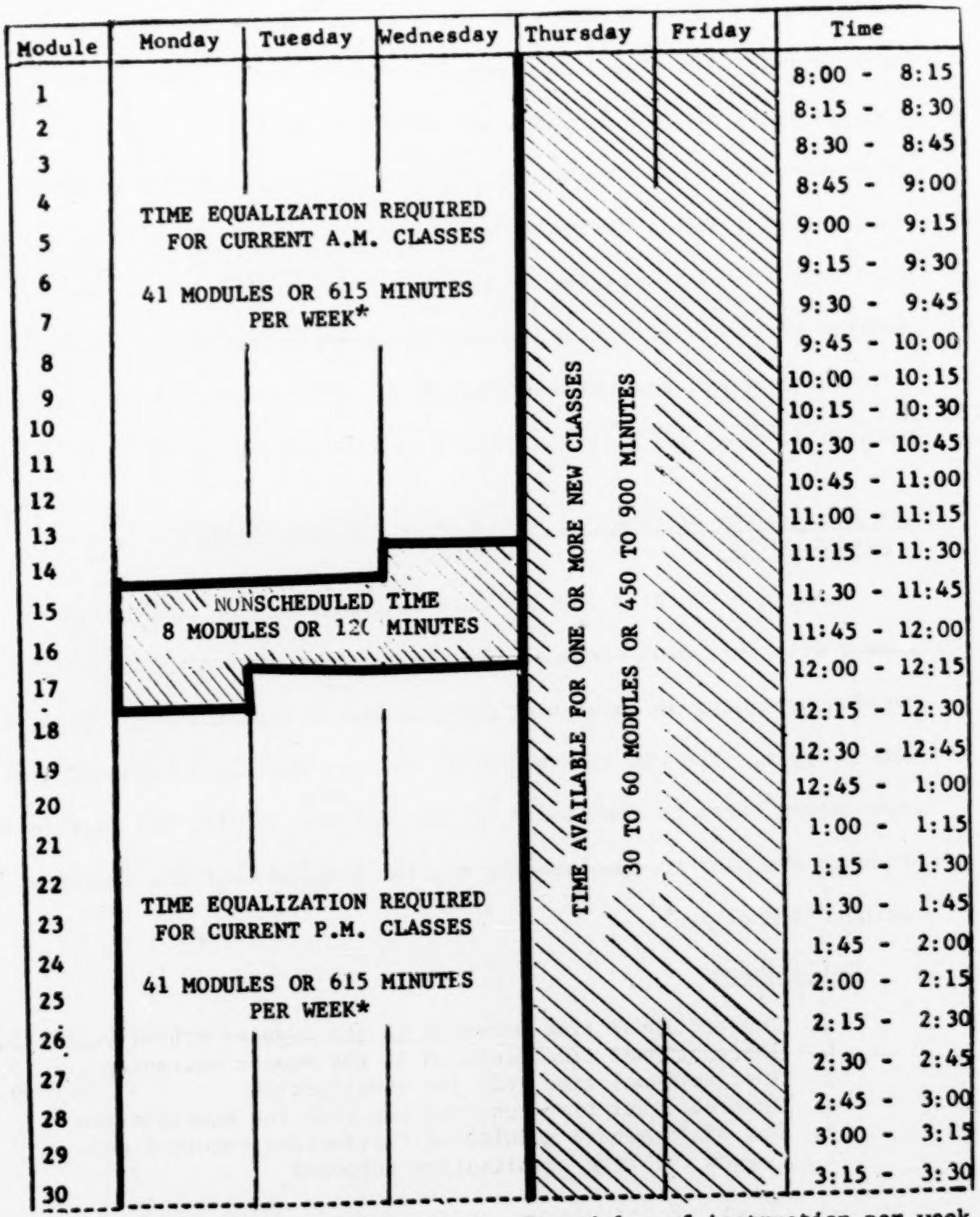


*Based upon time equalization for 50 modules of instruction per week in the current program.

Figure 23

PROJECTED USE OF THE OCCUPATIONAL TRAINING FACILITIES IN SCHOOL R

VARIATION #1--PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES COMPACTED IN A 3 DAY PERIOD



*Based upon time equalization for 55 modules of instruction per week in the current program.

8.F

Time Available for New Classes

The Multiple Session Week ESY Design is not apt to be of value to a school unless sending schools can free one or two mornings or afternoons per week and this contributes to the need for a late opening hour and an early dismissal. Figure 24 shows the current daily time schedule. Formal classes start at 9:00 a.m. and are scheduled to end at 2:30 p.m. The current schedule, theoretically provides 50 modules or 750 minutes of instruction a week. There is nothing unusual about this except for the fact that time is compacted towards the middle of the day. With only two modules of unscheduled time between the termination of one class and the start of another, the rescheduling of the day in terms of time equalization principles is possible, but it has some limitations.

The Feasibility of Creating a Middle of the Day Session:
Variation #1

Variation #1 calls for a 5 week extension of the program in the summer with 4 hour classes. Figure 25 shows that a middle of the day session providing 34 modules or 510 minutes of instruction is possible with this program. The new time block is adequate for the introduction of an exploratory class in the middle of the day, but it will not suffice for students who want to complete the regular program over the course of the extended school year.

Calculation:

a.	Instructional time provided in the regular school year	25,500 min.
b.	Instructional time provided in the summer extension	6,000 min.
c.	Instructional time left for equalization	19,500 min.
d.	Instructional time required per week for equalization	574 min.
e.	No. of 15 minute modules of instruction required per week for time equalization purposes	38 mod.

Figure 24

PRESENT USE OF THE CLASSROOM FACILITIES IN OCCUPATIONAL TRAINING CENTER W

	Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
	1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
	2						8:15 - 8:30
	3						8:30 - 8:45
	4						8:45 - 9:00
A.M. SESSION	5	PRESENT A.M. SCHEDULE PROVIDES 10 MODULES OF INSTRUCTION PER SESSION OR 50 MODULES OR 750 MINUTES PER WEEK					9:00 - 9:15
	6						9:15 - 9:30
	7						9:30 - 9:45
	8						9:45 - 10:00
	9						10:00 - 10:15
	10						10:15 - 10:30
	11						10:30 - 10:45
	12						10:45 - 11:00
	13						11:00 - 11:15
	14						11:15 - 11:30
	15	NONSCHEDULED TIME 10 MODULES OR 150 MINUTES PER WEEK					11:30 - 11:45
	16						11:45 - 12:00
	17						12:00 - 12:15
P.M. SESSION	18	PRESENT P.M. SCHEDULE PROVIDES 10 MODULES OF INSTRUCTION PER SESSION OR 50 MODULES OR 750 MINUTES PER WEEK					12:15 - 12:30
	19						12:30 - 12:45
	20						12:45 - 1:00
	21						1:00 - 1:15
	22						1:15 - 1:30
	23						1:30 - 1:45
	24						1:45 - 2:00
	25						2:00 - 2:15
	26						2:15 - 2:30
	27	FREE	FREE	FREE	FREE	FREE	2:30 - 2:45
	28						2:45 - 3:00
	29						3:00 - 3:15
	30						3:15 - 3:30

Figure 25

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER 'W' WITH THE MULTIPLE SESSION DAY

VARIATION 1 PROVIDES TIME EQUALIZATION FOR A 5 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES*

	Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
	1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
	2						8:15 - 8:30
	3						8:30 - 8:45
	4						8:45 - 9:00
	5	TIME EQUALIZATION REQUIRED					9:00 - 9:15
A.M.	6						9:15 - 9:30
	7	38 MODULES OR 570 MINUTES PER WEEK					9:30 - 9:45
C	8						9:45 - 10:00
L	9						10:00 - 10:15
A	10						10:15 - 10:30
S	11						10:30 - 10:45
S	12						10:45 - 11:00
	13						11:00 - 11:15
	14	TIME AVAILABLE FOR A NEW CLASS					11:15 - 11:30
NEW	15						11:30 - 11:45
	16	34 MODULES OR 510 MINUTES PER WEEK					11:45 - 12:00
C	17						12:00 - 12:15
L	18						12:15 - 12:30
A	19						12:30 - 12:45
S	20						12:45 - 1:00
S	21						1:00 - 1:15
P.M.	22						1:15 - 1:30
	23	TIME EQUALIZATION REQUIRED					1:30 - 1:45
C	24	38 MODULES OR 570 MINUTES PER WEEK					1:45 - 2:00
L	25						2:00 - 2:15
A	26						2:15 - 2:30
S	27						2:30 - 2:45
S	28	FREE	FREE	FREE	FREE	FREE	2:45 - 3:00
	29						3:00 - 3:15
	30						3:15 - 3:30

*Based on time equalization for 170 instructional days.

The Feasibility of Creating a Middle of the Day Session:
Variation #2

Variation #2 calls for a 6 week extension of the program in the summer with 3 hour classes. Figure 26 shows that a middle of the day session providing 30 modules or 450 minutes of instruction is possible with this program. This time block is adequate for the instruction of an exploratory class in the middle of the day, but it will not suffice for students who want to complete the equivalent of the regular school year program in an extended school year.

The Feasibility of Creating A Middle of the Day Session:
Variation #3

Variation #3 calls for a 6 week extension of the program in the summer with 4 hour classes. Figure 27 shows that a middle of the day session providing 38 modules or 570 minutes of instruction is possible with this schedule. Here, the length of the middle of the day session is more than adequate for students who want to complete the equivalent of the regular school year program in an extended school year. Students who are interested in working in an occupational training program can be released. The field studies showed that a lack of flexibility on the part of sending school teachers and principals can destroy the effectiveness of the entire program. This problem can be resolved through the introduction of some pattern of flexible scheduling. For example, a period rotation schedule or schedules with some extended period lengths may reduce the need for holding classes on a daily basis. This is a prerequisite for the success of this pattern of school organization.

Time can be made available for new classes at the occupational training center, however, the instructors at the center as well as the teachers from the sending schools must be prepared to cope with new learning time

Figure 26

POTENTIAL USE OF CLASSROOM SPACE IN OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION DAY

Variation 2

PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 3 HOUR CLASSES*

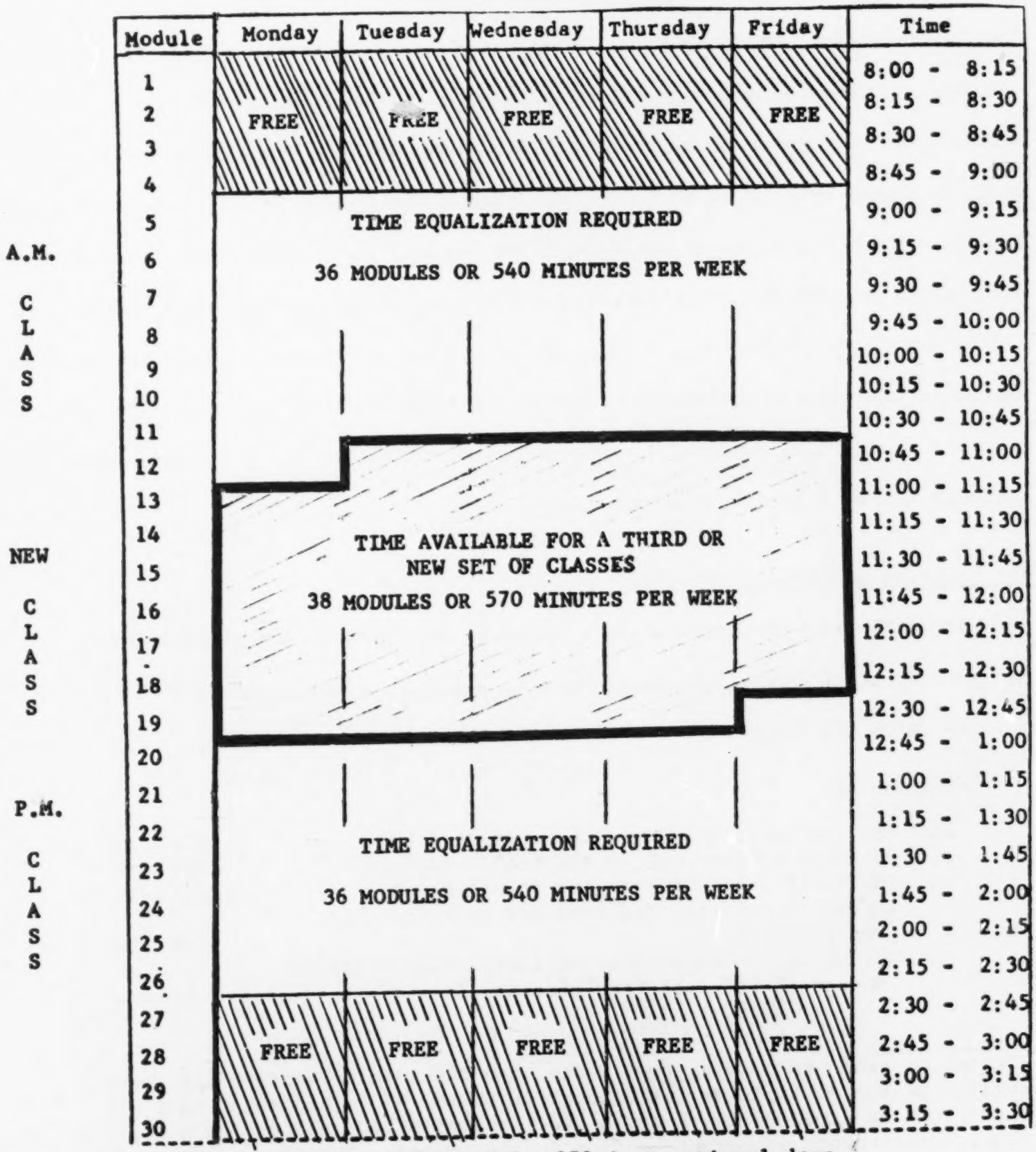
	Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
	1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
	2						8:15 - 8:30
	3						8:30 - 8:45
	4						8:45 - 9:00
	5	TIME EQUALIZATION REQUIRED					9:00 - 9:15
A.M.	6						9:15 - 9:30
	7	40 MODULES OR 600 MINUTES PER WEEK					9:30 - 9:45
C	8						9:45 - 10:00
L	9						10:00 - 10:15
A	10						10:15 - 10:30
S	11						10:30 - 10:45
S	12						10:45 - 11:00
	13	TIME AVAILABLE FOR A NEW CLASS					11:00 - 11:15
	14						11:15 - 11:30
NEW	15	30 MODULES OR 450 MINUTES PER WEEK					11:30 - 11:45
C	16						11:45 - 12:00
L	17						12:00 - 12:15
A	18						12:15 - 12:30
S	19						12:30 - 12:45
S	20						12:45 - 1:00
	21						1:00 - 1:15
P. M.	22	TIME EQUALIZATION REQUIRED					1:15 - 1:30
C	23						1:30 - 1:45
L	24	40 MODULES OR 600 MINUTES PER WEEK					1:45 - 2:00
A	25						2:00 - 2:15
S	26						2:15 - 2:30
S	27	FREE	FREE	FREE	FREE	FREE	2:30 - 2:45
	28						2:45 - 3:00
	29						3:00 - 3:15
	30						3:15 - 3:30

*Based on time equalization for 170 instructional days.

Figure 27

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION DAY

VARIATION 3 PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4 HOUR CLASSES*



*Based on time equalization for 170 instructional days.

blocks. Some class groups may meet for shorter learning session than they do, while others will work for longer periods, even a full day.

The Feasibility of an ESY MINI-Program

Field studies showed that space and dollars could be released if the BOCES Occupational Training Center designated as W were to adopt one, if not two, recommended extended school year programs based upon the time equalization concept. However, time limitations made it clear that it would be impossible to do anything more than a small experimental program.* The sponsors of the program had long since learned that a voluntary student participation program was unrealistic. The experimental group could become a divisive force in both the sending and receiving schools. Because it was small, it was labeled an ESY MINI-Program. Essentially, the primary objective was to identify potential problems and their solutions. The immediate goal was not to release classroom space.

The Existing BOCES Time Schedule

Occupational training center W serves more than 20 school districts in upper New York State. Students have long bus rides to the learning centers which are housed in several buildings several miles apart.

Calculation:

a.	Instruction provided in the regular school year	25,500 min.
b.	Instruction provided in the summer extension	7,200 min.
c.	Instructional time left for equalization	18,300 min.
d.	Instructional time required per week for time equalization	539 min.
e.	No. of 15 minute modules of instruction required per week for full time equalization	36 mod.

*The school year was drawing to a close when the idea of testing the feasibility of the multiple trails concept in BOCES W This meant that all that could be expected was a crash type program based upon taking a small number of students who might be free in the summer. There was little time or staff to prepare the potential 22 sending school districts for the problems that developed. Nobody really knew what to expect so the mini-program became an exploratory one.

It should be noted from the foregoing that at least one full extra class can be accommodated in the BOCES Vocational Training Center designated as occupational center W. This will provide the equivalent of a 50 percent increase in the school's capacity if it is needed. The difference in the presentations designated as figures 25, 26, and 27 is essentially one of time extension. A miniature of mini-time extension will not provide the space required for a full program. Figures 25 and 26 provided space in the middle of the day, but they were not suited to occupational center W's present daily time schedule. However, a mere adjustment of the opening and closing hours of the school would have solved the problem. A 15 minute shift in the morning schedule and another 15 minute shift in the afternoon schedule would have added 10 more modules to the middle of the day, thereby increasing the nonscheduled time sufficiently to more than meet time equalization requirements for a full third class section for variations 1 and 2 as well as variation 3. In the case of variation 3, students working in the middle of the day session would earn almost enough time with the adjusted day to meet regular school year requirements. They would be short the equivalent of 2 modules a week or a total of just under 20 hours, actually 17 hours, of meeting time requirements without having to attend classes during the summer.

The Feasibility of Creating a Multisession Week in Occupational Training Center W in Contrast to the Multisession Day

The choice of time equalization ESY plans is up to the local schools and the occupational training center staffs. They could resolve this issue on the basis of a number of points. For example, one field study contact visualized an increase in school bus mileage with the multisession week. On the other hand there are some complex scheduling problems to the

multisession week which make it difficult to implement. Some of these will become apparent as soon as the comparative student week is considered for training center W. However, it should also be noted that schools which resolve the internal scheduling problem will find that the multiple-session week is one which opens the door to work experience programs, exploratory days, opportunities to provide students with a chance to make up deficiencies in either the academic or special vocational program. Variations 4, 5, and 6 show the same basic time requirements for regular students that were shown in variations 1, 2, and 3, namely, figures 25, 26, and 27. The important difference lies in the way the work week is blocked out.

The Feasibility of Creating a Multisession Week:
Variation #4

Variation #4 is based upon a 5 week extension of the program into the summer with a 4 hour class restriction. A look at figure 28 shows that students in the regular morning session category will receive their 38 modules of instructional time; only it is now compacted into three morning sessions and a portion of a fourth or three afternoon sessions and a portion of a fourth. If one wants to compact the time into 3 days with the 38 modular requirement, it can be done through varying the length of the class sessions. For example: Regular morning session students might work through 14 modules on Tuesday, 13 modules on Monday, and 11 modules on Wednesday. Similarly, the afternoon session students might work through 11 modules on Wednesday, 14 modules on Thursday, and 13 modules on Friday. This would free a portion of the morning on Thursday and Friday and a portion of the afternoon sessions on Monday and Tuesday. This pattern can be seen in variation 4b, figure 29.

Figure 28

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

Variation 4a. Provides Time Equalization for a 5 Week Extension of the School Year With 4 Hour Classes

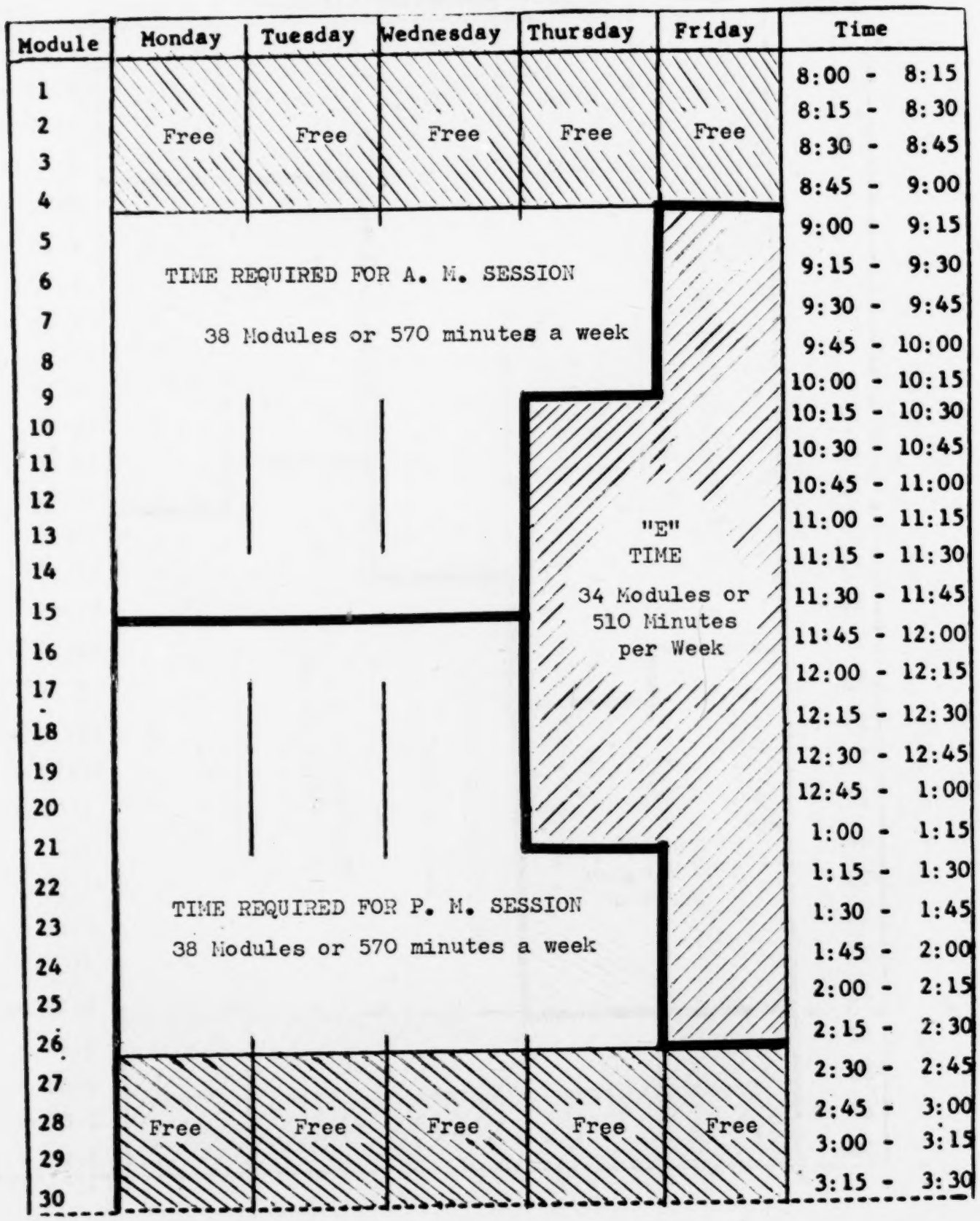
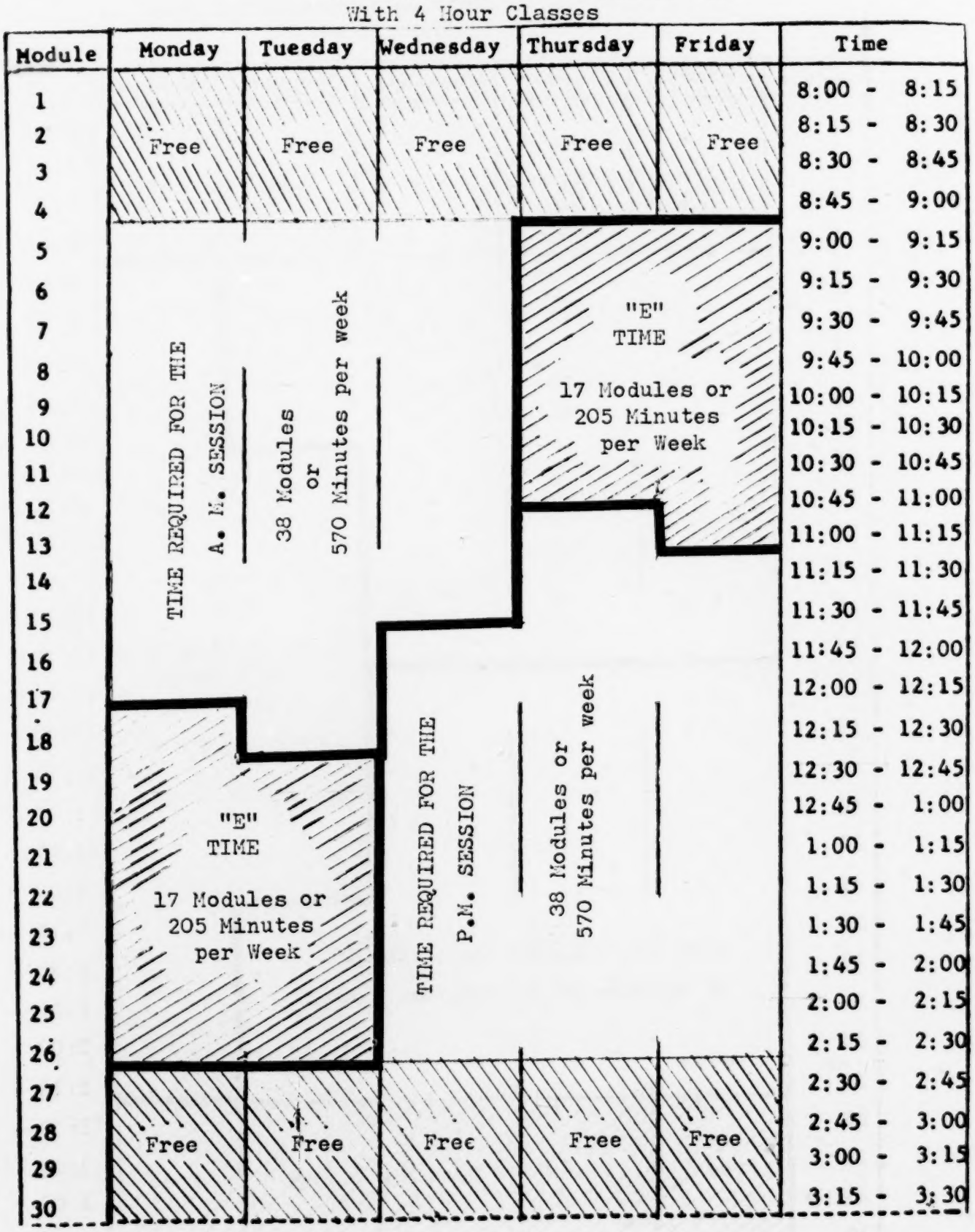


Figure 29

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

Variation 4b. Provides Time Equalization for a 5 Week Extension of the School Year With 4 Hour Classes



There isn't enough free time in this tight schedule for a third class session unless requirements are changed or length of the morning and afternoon entry and closing hours adjusted slightly.

The Feasibility of Creating a Multiple Session Week:
Variation #5

Variation #5 is based upon a 6 week extension of the program into the summer with a 3 hour class restriction. A look at figure 30 shows that students in the regular morning and afternoon sessions receive their full 40 modules of instruction in four class sessions. There is a small block of free time in this pictorial in the middle of the day plus one free day. It is far from adequate for regular class activity. The only alternative here is to introduce exploratory programs, extend programs over 3 years, and then modify time equalization priorities or adjust the opening and closing hours. Otherwise, little space will be realized with the 6 week time extension and the 3 hour class.

The Feasibility of Creating a Multiple Session Week:
Variation #6

Variation #6 calls for a 6 week extension of the program with 4 hour classes. Figure 31 shows a daily class schedule arrangement for each of three potential class groups.

a. The morning class is able to meet equalization requirements through attending classes 3 days a week. A student will receive 3 hours of instruction in the occupational training center and will be free to work 2 full days in his home school.

b. The traditional afternoon class is able to meet equalization requirements through attending class 3 days a week, but the days are not equal in length. As a result a typical student receives 2½ hours of instruction on Wednesday and 3¼ hours on Thursday and Friday. He is free to work 2 full days in the high school in addition to the three morning sessions.

Figure 30

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

Variation 5. Provides Time Equalization for a 6 Week Extension of the School Year With 3 Hour Classes

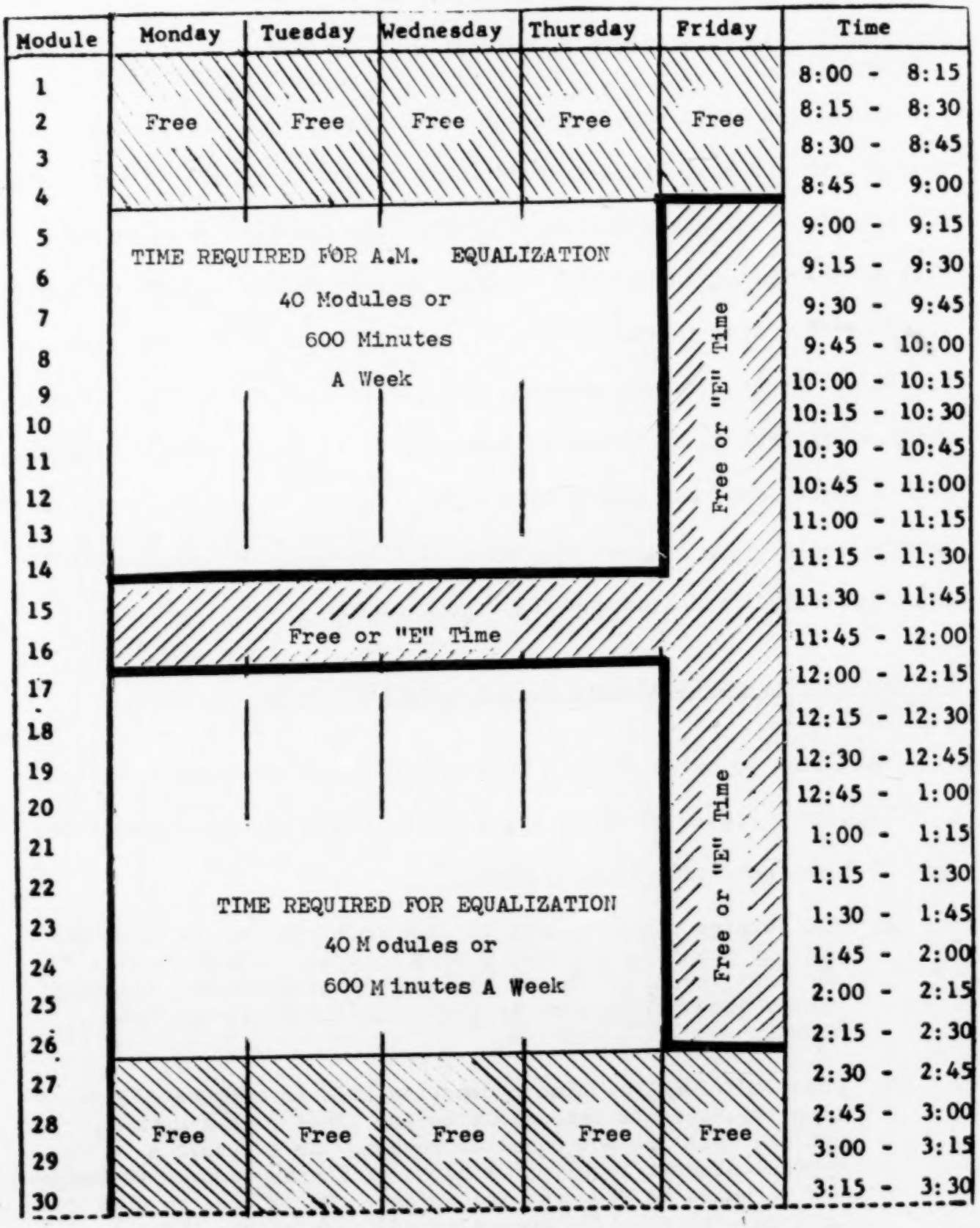


Figure 31

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

Variation 6. Provides Time Equalization for a 6 Week Extension of the School Year With 4 Hour Classes

Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
1	Free	Free	Free	Free	Free	8:00 - 8:15
2						8:15 - 8:30
3						8:30 - 8:45
4						8:45 - 9:00
5	TIME REQUIRED FOR A.M. EQUALIZATION			"E" TIME		9:00 - 9:15
6						9:15 - 9:30
7						9:30 - 9:45
8	36 Modules or 540 Minutes Per Week			18 Modules or 270 Minutes Per Week		9:45 - 10:00
9						10:00 - 10:15
10						10:15 - 10:30
11						10:30 - 10:45
12						10:45 - 11:00
13						11:00 - 11:15
14						11:15 - 11:30
15						11:30 - 11:45
16						11:45 - 12:00
17	"E" TIME			TIME REQUIRED FOR P.M. EQUALIZATION		12:00 - 12:15
18						12:15 - 12:30
19						12:30 - 12:45
20						12:45 - 1:00
21						1:00 - 1:15
22	20 Modules or 300 Minutes Per Week			36 Modules or 540 Minutes Per Week		1:15 - 1:30
23						1:30 - 1:45
24						1:45 - 2:00
25						2:00 - 2:15
26						2:15 - 2:30
27	Free	Free	Free	Free	Free	2:30 - 2:45
28						2:45 - 3:00
29						3:00 - 3:15
30						3:15 - 3:30

c. The new class has a split week which appeals to many individuals even though it requires 4 days of classes instead of 3. A typical student for 2½ hours on Monday and Tuesday afternoons and for 2¼ hours on Thursday and Friday afternoons.

Students in the third category will more than meet ordinary time equalization requirements, but they will still need to attend school in the summer if all students are to be held to the same yearly time prerequisites. If the instructors are flexible, a common or fixed time requirement for all students will soon be recognized as an absurdity since individual differences exist in occupational students just as much as they do in reading and arithmetic classes.

> Occupational training center W instructors acknowledged the existence of such differences repeatedly, but were not always prepared to adjust to them due to curriculum problems. One instructor said: "We train kids to become mechanics. It doesn't take us long to spot the one or two boys who may ultimately become master mechanics. They stand out. Then there are a few you know will never be able to do much more than change tires and pump gasoline. In between are many boys who do pretty well in different categories."

However, if a school must hold to rigid time requirements, it is possible to provide a class or a segment of a class with actual work experience on the day or days where they do not have to be back in the high school. If enough job opportunities can be found during the year, a large segment of students would not have to return to classes at the occupational center when regular high school classes end in June.

The Length of the Summer Extension Is the Critical Element

Summer schools have been operated in schools throughout the country for the past 70 years or more. Pupils have attended classes for 2 to 12 weeks without showing any ill effects from their prolongation of the school year, therefore the length of the summer extension should

depend upon need or the goals to be realized. Closely related to the length of the summer extension will be the length of the school day. If time equalization principles are observed, the combination of the two becomes the critical element. This was demonstrated in figures 29 and 30. A 6 week summer extension with 3 hour classes provided less flexibility than a 5 week extension with 4 hour classes. In contrast, figure 32 shows an even greater degree of flexibility in the September to June program with time equalization based upon a 6 week extension combined with a 4½ hour work day.

> A number of critics thought that such a day would be excessive, but it need not be if instructors vary student experiences. Again, length of the class period varies with the interest or student goals. In one of our classes students in the conservation class were engaged in making a recreation area for old people. The students moved trees and brush and leveled the land for a parking area. One had to see some of the pupils who had been labeled deadbeats, toughies, morons, etc., working with heavy equipment such as a caterpillar. The summer day wasn't long enough for them because they were getting a feeling of accomplishment as they worked with machines that made them important.

One survey of students led to the conclusion that many students would have readily worked a 5, 6, or even a 7 hour day. Of course, this would have led to a reduction in the number of weeks of school. In contrast a different group of students would have attended school for 7, 8, or more weeks in the summer in order to limit class attendance to 2 to 2½ hours a day since a short instructional period would not interfere with their chance to keep a summer job.

Center W has an extremely short day; therefore, it is necessary to have a longer session in the summer to open up the middle of the day. The point has already been made that a mere 15 minute adjustment in the opening and closing hours would have reduced the need for an overly long summer extension. For demonstration purposes this will not be done here.

However, it may be worth considering the length of a summer extension deemed necessary to provide one of three classes with sufficient instruction time available to it to avoid having to go beyond the normal June closing date. Figure 33 shows how this can be done through one of several time extensions. For example, Class I and Class II need to reduce their regular school year time requirements to 30 modules or about 450 minutes a week. This can be approximated by:

a. A 7 week extended segment with 4 3/4 hour classes
b. An 8 week extended segment with 4½ hour classes
c. A 9 week extended segment with 3 3/4 hour classes
d. A 10 week extended segment with 3½ hour classes

Illustration:

1.	Number of minutes of instruction provided in the regular school year.	25,500 Min.
2.	Amount of instruction required per week to complete Course III in the regular year.	
	a. No. of minutes per week.	750 Min.
	b. No. of 15 minute modules.	50 Mod.
3.	Number of 15 minute modules available per day for instruction between 9:00 a.m. and 2:30 p.m.	22 Mod.
4.	Number of 15 minute modules available per week.	110 Mod.
5.	Amount of time provided in an 8 week extension of the school year with 4¼ hour classes.	10,200 Min.
6.	Amount of time left for equalization with the 8 week extension and 4½ hour classes.	15,300 Min.
7.	Amount of time required per week for equalization of the 8 week extension.	
	a. 15,300 divided by 34.	447 Min.
	b. 447 minutes divided by 15 minutes.	30 Mod.
8.	Number of classes to be equalized.	2
9.	Number of modules required for Class I and Class II.	60 Mod.
10.	Number of modules left for Class III (per week).	50 Mod.

The length of the summer segment may be extended or reduced on the basis of the basic program objectives. Thus, if the new Class III course is designated as a mere exploratory course, the free time may be segmented for single class day exposure or the time may be assigned to different groups, one coming in the morning and one in the afternoon without any concern regarding the number of minutes of instruction offered in the regular school year. In this case a shorter summer extension becomes a possibility through increasing the amount of time available for Course I and Course II students between September and June. Courses such as Cosmetology which have a prescribed 1,000 hour minimum may require more time during the regular year or an extra extension into the summer.

Occupational Training Center W's Mini-Program

A limited exploratory program was introduced at the occupational training center designated as W. The objective was to discover the nature of the problems educators would encounter if one or more variations of the extended school year plans were to be implemented in the future. Unfortunately, we learned that miniature or ESY-mini programs create problems which are often nonexistent when an entire school or system is operating in terms of a common lengthened school year time line. For example:

> The small number of students taking part in the ESY summer extension mini-program created problems for teachers in the fall when they were placed in classes with beginning students. Teachers who were accustomed to working with students at different levels or who used a contract approach had no problems, but the teachers who were followers of the all-class-together approach didn't know how to cope with the experience acquired by the ESY pupils.

This type of problem immediately pointed up a need for a look at what the occupational training teacher does in the classroom. Several new State courses of study showed examples of program differentiation which would

have set the stage for multilevel interclass activity, but all instructors were not prepared to implement such flexible programs. Again, fragmentation of a class showed that:

a. some instructors are unable to cope with a class situation which allows a selected group of students to attend class for only 3 days instead of 5.

b. some instructors are unable to cope with a class situation which allows a new group of students to visit, observe, or actually start a new program based upon 1 or 2 days of attendance while other pupils in the same room are scheduled to work through five regular class sessions per week.

In brief the first hurdle of the ESY mini-program called attention to the curriculum and to the techniques of teaching necessary to implement what could be considered as a flexible program, one which recognized individual stages of readiness for basic levels of instruction.

The Nature of the ESY Mini-Program

The actual ESY mini-program in center W was based upon a summer extension of 6 weeks with 3 1/3 hour classes. The 3 1/3 hour class was shorter than the recommended patterns shown in figures 31 and 32. However, it was due to an attempt to set up a special bus schedule for the small number of students, about 70, who were involved in the new program. School buses were already scheduled to take students to a regular summer school near the occupational training center, however, its hours were less than what was considered necessary to release classroom space. The ESY mini-program pointed up the dangers of an over dependence upon a rigid bus schedule. For example, a large number of the ESY students had driver's licenses, but were not allowed to use their own cars to get to and from the occupational training center. In contrast the public schools had no such restriction. A number of problems that stemmed from over dependence upon restrictive school bus transportation schedules could have been eliminated.

Figure 32

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

VARIATION 7 --PROVIDES TIME EQUALIZATION IN 3 DAYS THROUGH A 6 WEEK EXTENSION OF THE SCHOOL YEAR WITH 4½ HOUR CLASSES*

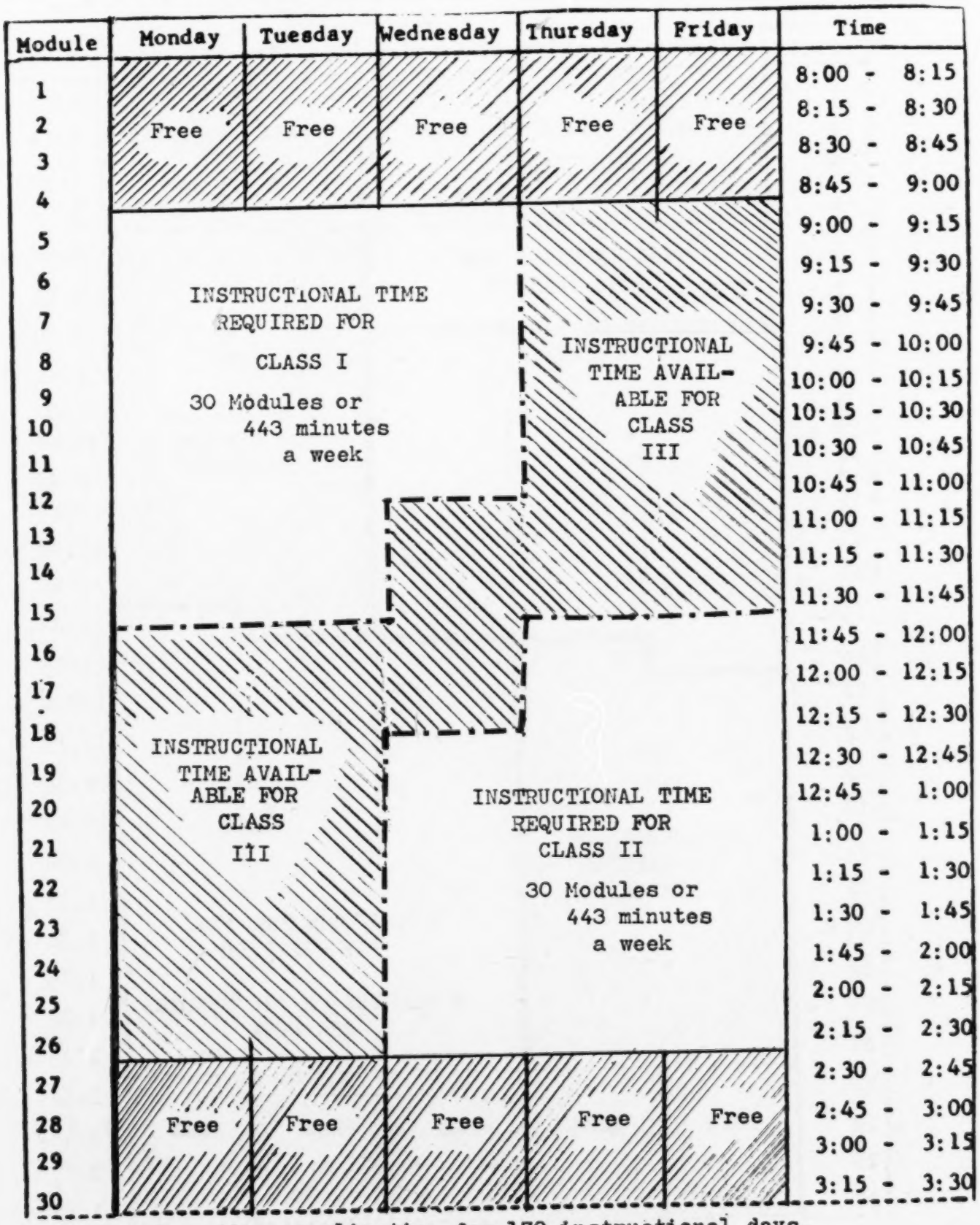
Module	Monday	Tuesday	Wednesday	Thursday	Friday	Time
1	FREE	FREE	FREE	FREE	FREE	8:00 - 8:15
2						8:15 - 8:30
3						8:30 - 8:45
4						8:45 - 9:00
5	TIME REQUIRED FOR A.M. SESSION			"E" TIME		9:00 - 9:15
6						9:15 - 9:30
7	34 MODULES OR 510 MINUTES PER WEEK			21 MODULES OR 315 MINUTES PER WEEK		9:30 - 9:45
8						9:45 - 10:00
9						10:00 - 10:15
10						10:15 - 10:30
11						10:30 - 10:45
12						10:45 - 11:00
13						11:00 - 11:15
14						11:15 - 11:30
15						11:30 - 11:45
16						11:45 - 12:00
17						12:00 - 12:15
18	"E" TIME			TIME REQUIRED FOR P.M. SESSION		12:15 - 12:30
19						12:30 - 12:45
20	21 MODULES OR 315 MINUTES PER WEEK			34 MODULES OR 510 MINUTES PER WEEK		12:45 - 1:00
21						1:00 - 1:15
22						1:15 - 1:30
23						1:30 - 1:45
24						1:45 - 2:00
25						2:00 - 2:15
26						2:15 - 2:30
27	FREE	FREE	FREE	FREE	FREE	2:30 - 2:45
28						2:45 - 3:00
29						3:00 - 3:15
30						3:15 - 3:30

*Based on time equalization for 170 instructional days.

Figure 33

PROJECTED USE OF CLASSROOM FACILITIES IN THE OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

Variation 8. Eliminates Need for a Summer Extension for the New Class Through an Extended Summer Segment Providing Class I and II Students With 10,500 Minutes of Instructional Time or Activities*



* Based on time equalization for 170 instructional days.

Students who worked in the summer earned 6,000minutes of "E" time. In the first year they were allowed to use the time to be released from regular class activities on a regular 1 to 2 days a week basis. In the second year the time was allowed to be accumulated for release as a large block of time, i.e., several weeks instead of days.

Calculations:

1. Number of minutes of instruction provided in the regular school year	25,500 Min.
2. Number of minutes of instruction provided in a 6 week extension of the school calendar providing 200 minutes of instruction daily	6,000 Min.
3. Amount of instructional time required for equalization of a class between September and June	19,500 Min.
4. Amount of instructional time required per week during the regular school year with time equalization	574 Min.
5. Number of 15 minute modules required per week with time equalization	38 Mod.
6. Amount of free time accruing to students who have worked in the summer segment	
a. No. of days per week	1 Day+
b. No. of days per year	40 Days
c. No. of weeks per year	8 Weeks

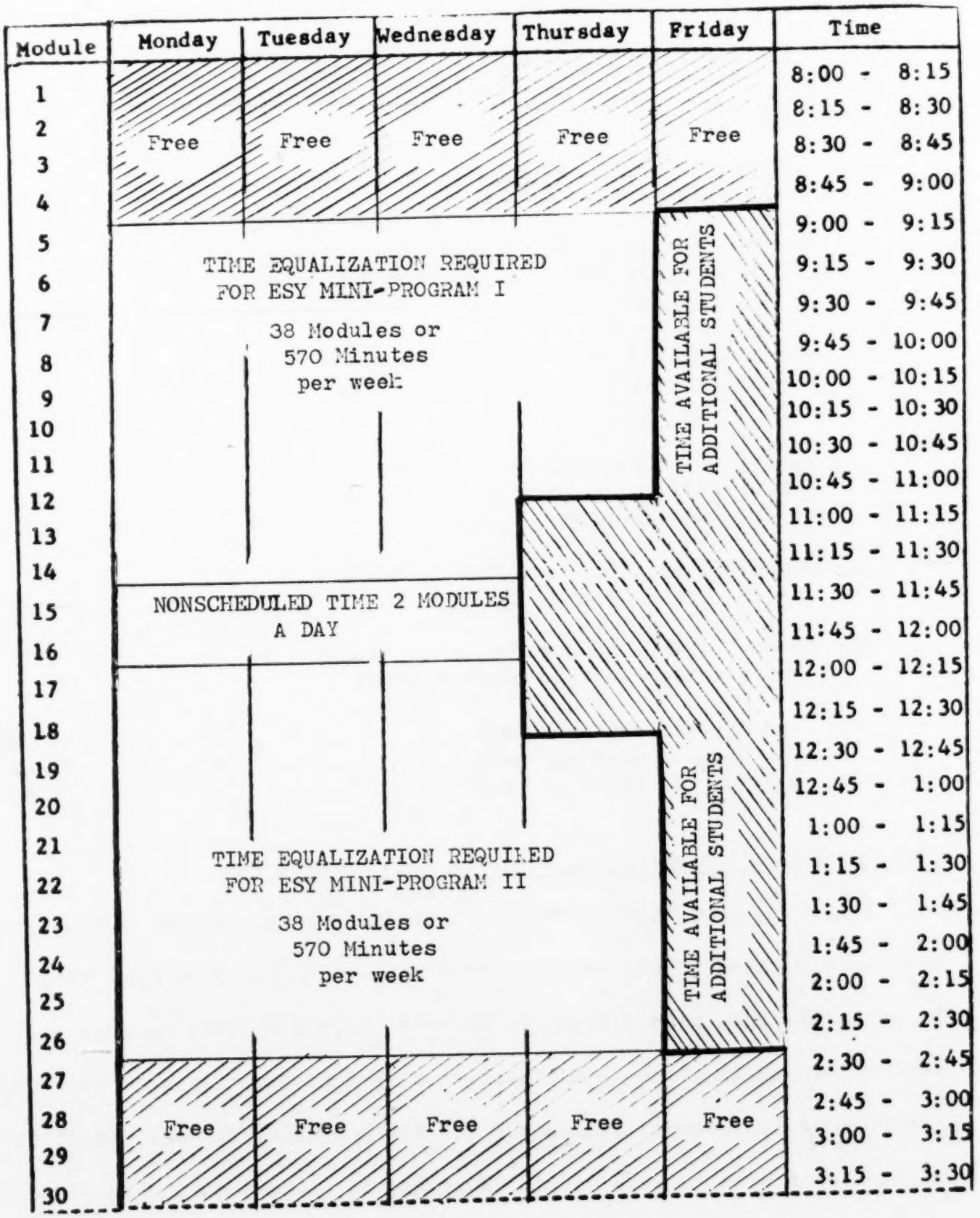
The Feasibility of Releasing Students for a Single Day

Figure 34 shows one variation of the time requirements of students who have been working in the ESY mini-program. In terms of minimal time requirements they have a right to be free one and a fraction days each week and in their place an administrator is theoretically able to bring in a number of replacement students. The block of time is small if it is considered on a week to week basis. However, it becomes much more significant if the time is allowed to accumulate so it can be used in a large time

Figure 34

POTENTIAL USE OF CLASSROOM SPACE IN OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK MINI-PROGRAM

Variation 1. Provides Time Equalization for a Six Week Extension of the School Year Providing 200 Minutes of Instruction a Day



block. How to use a single day should not pose a problem because many of the ESY students needed extra instructional time at the home school. For example, the normal tight schedule made it impossible for some occupational training school students to meet minimal physical education and health requirements. Again, other students had academic deficiencies or weaknesses which they should have been able to make up through auditing and special programing. Visits to the various sending schools to explain the need for special scheduling resulted in a promise that special programs would be worked out in a number of schools, but in others one encountered a resistance based upon inflexible policies or programs.

During the first year the occupational training staff used the "E" time or "Free Time" to provide related work experience for some students. Other students who had deficiencies in reading were given special remedial help in the area of the known deficiency. During the second experimental year a local insurance agent raised the question of the legal responsibility for students to engage in a work experience program under existing insurance laws. After some delay it was discovered that the courts have ruled that existing insurance policies provided the necessary protection desired if a student worked in a shop or plant where the work was related to his day by day class activities. The delay resulted in a limited work experience program. Some school administrators showed their antagonism to the program by insisting that they could not provide for students who were not scheduled into the regular 5 day week class program. At the same time some students showed a preference to remain at the occupational training center where they had friends. This desire to use their "E" time to do extra work in the occupational training classroom would, of course, work in opposition to the placement of new pupils in classes as replacement or exploratory students.

The Feasibility of Accumulating "E" Time

Figures 35 and 36 show how time can be accumulated in an ESY mini-program to provide large blocks of instructional time.

> Figure 35 presupposes that all students will return to the occupational training center in the fall for a regular 5 day program. If they continue with their classwork from where they left off in the summer, they will have completed three quarters of the course work by midyear. At this point the schedule is modified. Through combining the 6,000 minutes earned in the summer with 12,750 minutes earned in the first semester the students can meet normal course requirements in the second semester through working in the Center on one half time basis or by earning the equivalent of 26 to 27 modules of instructional time. If both morning and afternoon classes follow the same daily class schedules, it is possible to theoretically free space and instructor time for 2 full days and a portion of a third.
>
> Figure 36 uses the same basic time equalization concept. However, in this variation the morning group is shown using its reserve of free time in the first semester while the afternoon session students wait until the second term to use their "E" time for other than work in the occupational training center. Under this arrangement it would be possible to bring a third section of students into the occupational training program if they can change from working in the morning to the afternoon at midyear.

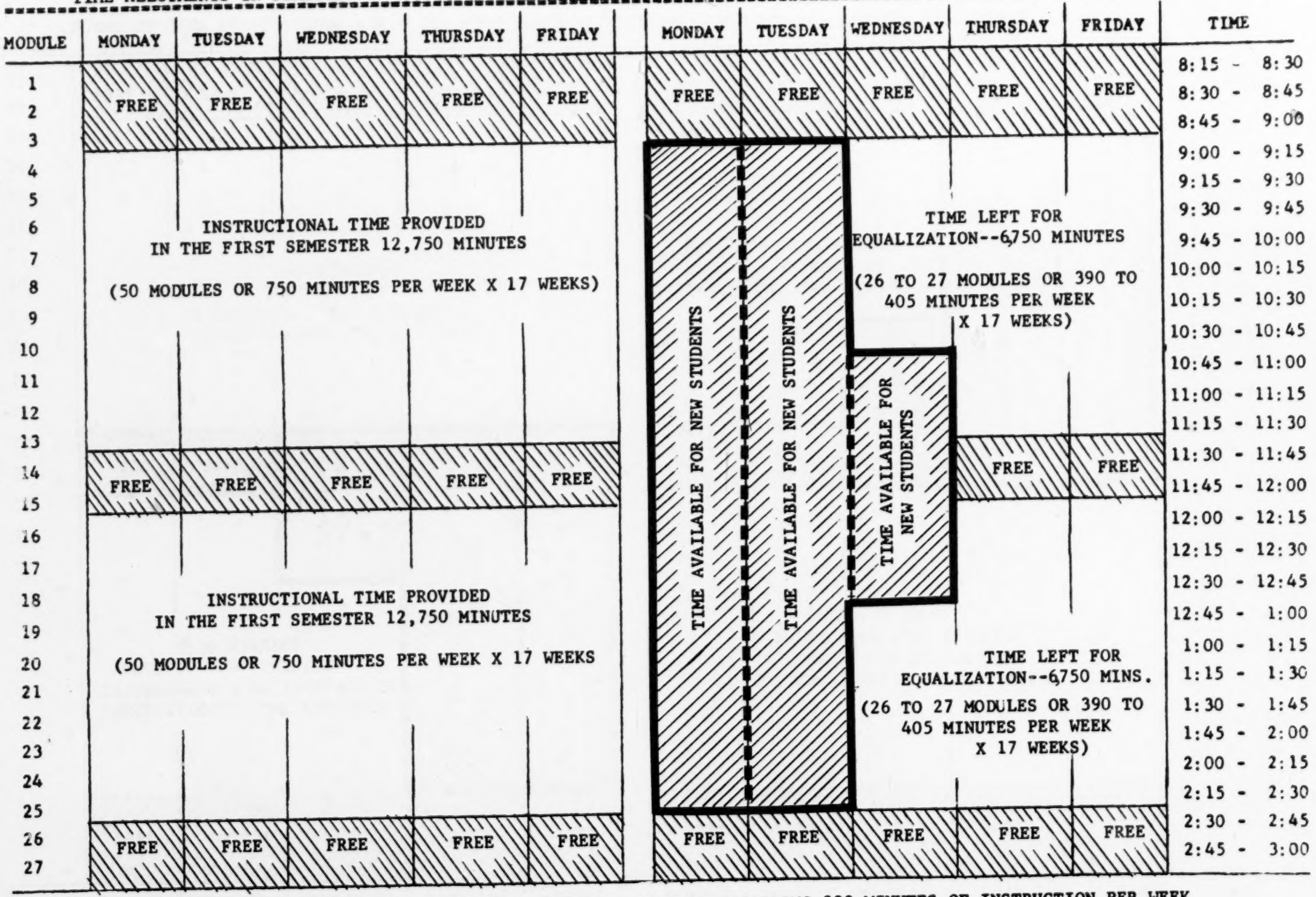
Figure 37 is a variation of the time equalization requirement shown in figure 35. Instead of showing a potential 2 full days of released time this variation merely rearranges the days in the second semester so the afternoon students take off different days than the morning students. Under this weekly time arrangement two different replacement groups can be entered, with one group coming to the center on Monday and Tuesday afternoons while another group comes on Thursday and Friday mornings.

Another alternative that may be considered calls for the ESY students to work through the first three quarters of the year on a full time basis at the occupational training center. Time is compounded until the last part of the year.

Figure 35

POTENTIAL USE OF CLASSROOM SPACE IN OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

VARIATION Mini 2*



*PROVIDES TIME EQUALIZATION FOR A 6 WEEK EXTENDED SEGMENT PROVIDING 200 MINUTES OF INSTRUCTION PER WEEK

Figure 36

POTENTIAL USE OF CLASSROOM SPACE IN OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

VARIATION Mini 2a*

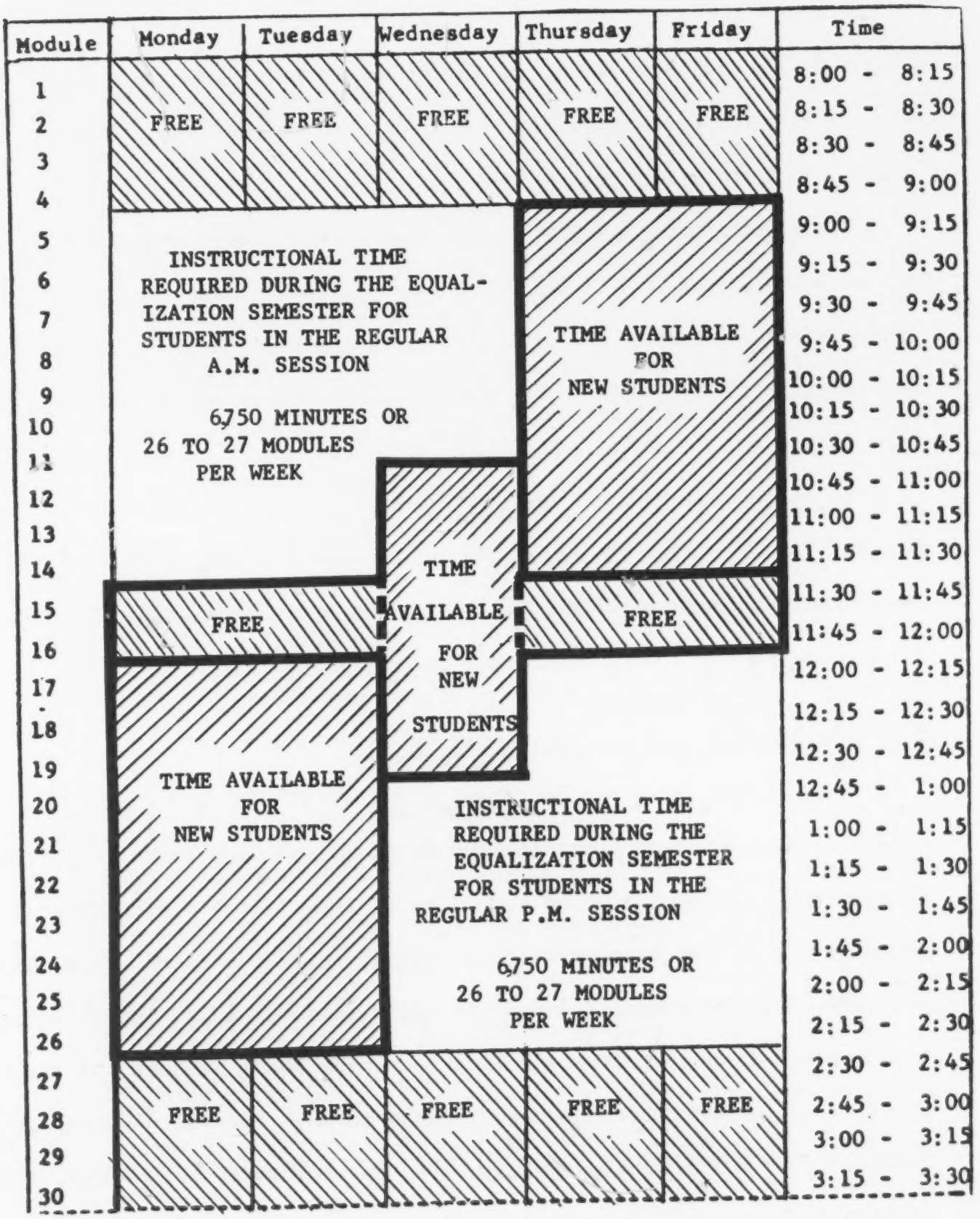
MODULE	TIME ALLOTMENTS IN SEMESTER I: MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME ALLOTMENTS IN SEMESTER II: MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
1	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	8:15 - 8:30
2											8:30 - 8:45
3											8:45 - 9:00
4	INSTRUCTIONAL TIME PROVIDED IN SEMESTER I TO STUDENTS IN REGULAR A.M. SESSION 6,750 MINUTES			TIME AVAILABLE FOR NEW STUDENTS	TIME AVAILABLE FOR NEW STUDENTS	INSTRUCTIONAL TIME PROVIDED IN SEMESTER II TO STUDENTS IN REGULAR A.M. SESSION 12,750 MINUTES					9:00 - 9:15
5											9:15 - 9:30
6											9:30 - 9:45
7											9:45 - 10:00
8											10:00 - 10:15
9											10:15 - 10:30
10											10:30 - 10:45
11											10:45 - 11:00
12											11:00 - 11:15
13											11:15 - 11:30
14	FREE	FREE	TIME AVAILABLE FOR NEW STUDENTS	TIME AVAILABLE FOR NEW STUDENTS	TIME AVAILABLE FOR NEW STUDENTS	FREE	FREE	TIME AVAILABLE FOR NEW STUDENTS	TIME AVAILABLE FOR NEW STUDENTS	TIME AVAILABLE FOR NEW STUDENTS	11:30 - 11:45
15											11:45 - 12:00
16											12:00 - 12:15
17											12:15 - 12:30
18	INSTRUCTIONAL TIME PROVIDED IN SEMESTER I TO STUDENTS IN P.M. SESSION 12,750 MINUTES					INSTRUCTIONAL TIME PROVIDED TO STUDENTS IN REGULAR P.M. SESSION--6,750 MINUTES					12:30 - 12:45
19											12:45 - 1:00
20											1:00 - 1:15
21											1:15 - 1:30
22											1:30 - 1:45
23											1:45 - 2:00
24											2:00 - 2:15
25											2:15 - 2:30
26	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	FREE	2:30 - 2:45
27											2:45 - 3:00

*PROVIDES TIME EQUALIZATION FOR A SIX WEEK EXTENDED SEGMENT PROVIDING 200 MINUTES OF INSTRUCTION PER WEEK

Figure 37

POTENTIAL USE OF CLASSROOM SPACE IN OCCUPATIONAL TRAINING CENTER W WITH THE MULTIPLE SESSION WEEK

COMPACTING "E" TIME FOR TWO GROUPS OF STUDENTS TO FREE FOUR DIFFERENT SESSIONS FOR REPLACEMENT STUDENTS



At this point they can be released for approximately 40 days or 8 weeks. If work opportunities are available throughout the year, it is possible to program four separate students so each one is released from regular occupational training classes for approximately 8 weeks with each student working in the field for a quarter of the year. When the job is related to the class, it is possible to credit a portion of the time earned in the field against normal course requirements to free additional instructional clock hours. (figure 38)

The experimental program showed that few academic school principals were ready to make what might be called a radical change in the school schedule for a transitory or limited ESY program. When told about the availability of the time blocks shown in figure 36 and 37, they conceded that they might be able to free a few students for a quarter of the year to work in the occupational program on an exploratory or limited first time program for 1 day. This could be done on an excused from class basis rather than through rescheduling. Thus four groups of students working 1 day a week at the center became a distinct possibility.

Time Equalization for an ESY Mini-Program

True economy will not be achieved with an ESY mini-program. Since it is a voluntary student participation program involving limited numbers of pupils, the program had to be subsidized. Theoretically, the initial costs could have been met through fitting regular tuition students into some variations of the schedules shown in the preceding pages, but staffing problems and bus transportation complications plus the fact that the ESY students were few in numbers and were spread through several courses made this difficult. The ESY mini-program pointed up weaknesses in the curriculum of both the sending and receiving schools that could only be corrected

Figure 38

POTENTIAL STUDENT SCHEDULE IN OCCUPATIONAL TRAINING CENTER W --RELEASE OF STUDENTS FROM VOCATIONAL TRAINING PROGRAM THROUGH COMPACTING TIME EQUALIZATION REQUIREMENTS IN THREE TERMS

	Module	First Quarter 9 Weeks	Second Quarter 9 Weeks	Third Quarter 9 Weeks	Fourth Quarter 9-10 Weeks	Time
A.M. SESSION	1	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	TIME AVAILABLE FOR WORK EXPERIENCE PROGRAM OR WORK IN HOME SCHOOL	9:00 - 9:15
	2					9:15 - 9:30
	3					9:30 - 9:45
	4					9:45 - 10:00
	5					10:00 - 10:15
	6					10:15 - 10:30
	7					10:30 - 10:45
	8					10:45 - 11:00
	9					11:00 - 11:15
	10					11:15 - 11:30
	11	FREE	FREE	FREE	FREE	11:30 - 11:45
	12					11:45 - 12:00
P.M. SESSION	13	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	TIME AVAILABLE FOR WORK EXPERIENCE PROGRAM OR WORK IN HOME SCHOOL	INSTRUCTIONAL TIME PROVIDED 6,750 MINUTES*	12:00 - 12:15
	14					12:15 - 12:30
	15					12:30 - 12:45
	16					12:45 - 1:00
	17					1:00 - 1:15
	18					1:15 - 1:30
	19					1:30 - 1:45
	20					1:45 - 2:00
	21					2:00 - 2:15
	22					2:15 - 2:30

*Based on 10 modules times 5 days x 9 weeks.

through the development of more flexible administrative and teaching policies or practices.

Problem Areas Revealed in the Experimental Mini-Program Conducted in the Occupational Training Center Called W

In many respects the miniature experimental program would have been easier to implement if the program had been based upon the use of the multiple session day instead of the multiple session week. Sending school principals reported that it would have been much easier to plan programs around a third session than it was to free students from basic programs structured around a 5 day week class schedule. In fact the reduced amount of time away from school by the occupational training students would have increased the sending school's actual flexibility since some students are often prevented from working or continuing in occupational training programs due to the need to repeat or take a course known as a singleton. With more free time during the day additional students could have been sent as replacement students at little, if any, cost to the sending district. As it was, some of the ESY students dropped out of the program because of scheduling conflicts within the home school, i.e., the need to take prescribed singleton courses.

> (Some of the early leavers were students who had worked in the occupational training program throughout the first year and would have learned a trade by the end of the second ESY year. The desire to graduate and internal school scheduling forced them to abandon all hopes for a future in what had looked like an attractive field of endeavor.)

The decision to adopt the multiple session week was based upon the desire to limit the introduction of a third bus route and the fact that only a fraction of the students in selected occupational training classes would be involved in the program. This made it virtually impossible

to restructure the BOCES schedule since instructors couldn't accommodate three full classes per day. With all students involved in the extended school year program, the rescheduling of student and teacher day would have been a minor problem.

Problem Areas Revealed in School W, a Miniature Experimental Extended School Year Program

Value in Terms of the Economy Objective

Earlier studies* have pointed up the hazards of instituting a voluntary student participation program. This field study helps to reaffirm the conclusion that space and economy objectives will not be realized with a freedom of choice plan. If entire vocational classes are involved on the extended school year program, then many of the problems encountered would be minimal.

The Isolated Student

Students were allowed to sign up for the special summer experimental program. Unfortunately, the decision to introduce the time equalization principles was made late in the school year. As a result the number of students in a vocational training class was small. Even though students were virtually isolated in the occupational training class, this was not the major problem. Since the students come from many schools, the sending schools were not prepared to reschedule one to five students into ongoing classes on the days they were free.

The fact that some of the students felt insecure about their isolated status was evident in the case of a student who indicated a desire to return to the high school to take driver training and personal typing in the "E" time. After arranging a schedule the student backed out because of the belief that the value of the instruction and practice received in the BOCES class would be greater than the proposed program.

*The Impact of a Rescheduled School Year, State Education Department, Division of Research and Evaluation. Pp. 127-128. March 1970.

Work Experience and the Insurance Issues

One of the obstacles encountered in attempts to place students into a work experience program centered around the difficulty in obtaining assurance from the insurance carrier for BOCES that a school insurance policy would protect the student.

This barrier prevented the BOCES from placing students in part-time jobs in beauty salons, nursing homes, garages, and areas where welding experience was desired to supplement that obtained in the BOCES classes. Later investigation showed that the insurance barrier was not real. Courts in New York State have ruled that the school insurance policies protect students engaged in a work school experience program.

Time Limitations

The experimental BOCES program was limited to a week extension of the school year with only a 3 1/3 hour day. It did not provide enough "E" time for a meaningful work experience. The students were released 1 day per week, but problems of transportation to and from the home schools tended to limit the number of hours students could work.

Transportation Problems

A BOCES policy restricting the use of student cars prohibited some students from obtaining jobs or working through a full morning or afternoon. Potential job opportunities in a nearby city could not be realized due to the lack of school bus routings to the city.

Many high school students in other areas drive cars to and from school. As licensed drivers they should have the right to use their cars like other citizens. The courts are ruling that students have the right to be recognized as citizens, therefore, the restrictive policy regarding the use of cars by licensed drivers during a school day may be questioned. In this case students coming from very small sending school districts where there were no job opportunities would not have been barred from working part time in a community where job openings existed.

Teacher Flexibility

The implementation of the program depends upon teacher flexibility. The study shows that

(1) Vocational instructors tried to keep their students with them. They resisted the effort to send students who had earned "E" time back to the home school or to a job.

(2) Academic teachers did not want to release their regular students to take part in an exploratory program 1 day a week.

This lack of teacher flexibility is a factor which must be recognized. The problem would not have been noticeable where entire classes were involved instead of a limited number of students in specific class sections.

Summary

A voluntary student participation program does not guarantee a release of classroom space or dollars. To be effective the BOCES program should involve entire classes, if not an entire training center. The experimental program pointed up potential problem areas which should be considered by educators interested in implementing an extended school year program. Most of the problems would not exist in an all school program. However, success will depend upon the development of a greater degree of flexibility on the part of all instructors, teachers, and school administrators.

CHAPTER V

THE MULTIPLE SESSION OCCUPATIONAL EDUCATION PROGRAM

The Nature of the Design

The Multiple Session ESY Program has a number of features which appeal to some occupational education center directors. Unfortunately, the design may not release as much space as the multiple session day or week. Its strength lies in that it may be implemented without resorting to a flexible schedule or one based on modifying existing starting or closing hours.

One approach to the Multiple Term Plan calls for the creation of a third term similar to a trimester. This consists of compacting enough learning time into a 6, 7, or 8 week summer session to equalize the instructional time provided in a regular semester. The adjusted trimester will have fewer days of schooling so the time equalization is achieved by lengthening the school day. Thus, the length of the school day and the length of the summer term can be varied to suit local school needs and interests.

An arbitrary or abbreviated summer extension calendar may be created based on recognition that the new term can be more productive since less time is lost from such interruptions as announcements, dressing, locating tools or work, putting tools away, and cleaning up.

With time equalization based on the introduction of a new third term or trimester it is possible to house and educate 25 to 50 percent more students in a designated vocational training center. The space acquisition is dependent on always having one group of students away from the center for a trimester.

Present and Proposed Calendar Choices

The regular school year calendar is fixed. All students attend classes from September through June without exception. This is evident in figure 39. Here group K students attend morning occupational training classes through Terms A and B. The first term begins in early September and ends in mid-January. Almost immediately the students commence a second term which runs through most of the month of June. Similarly, group M students attend afternoon classes from September to January and then from January to June. None of the students work in the occupational training center during the proposed third term, Term C.

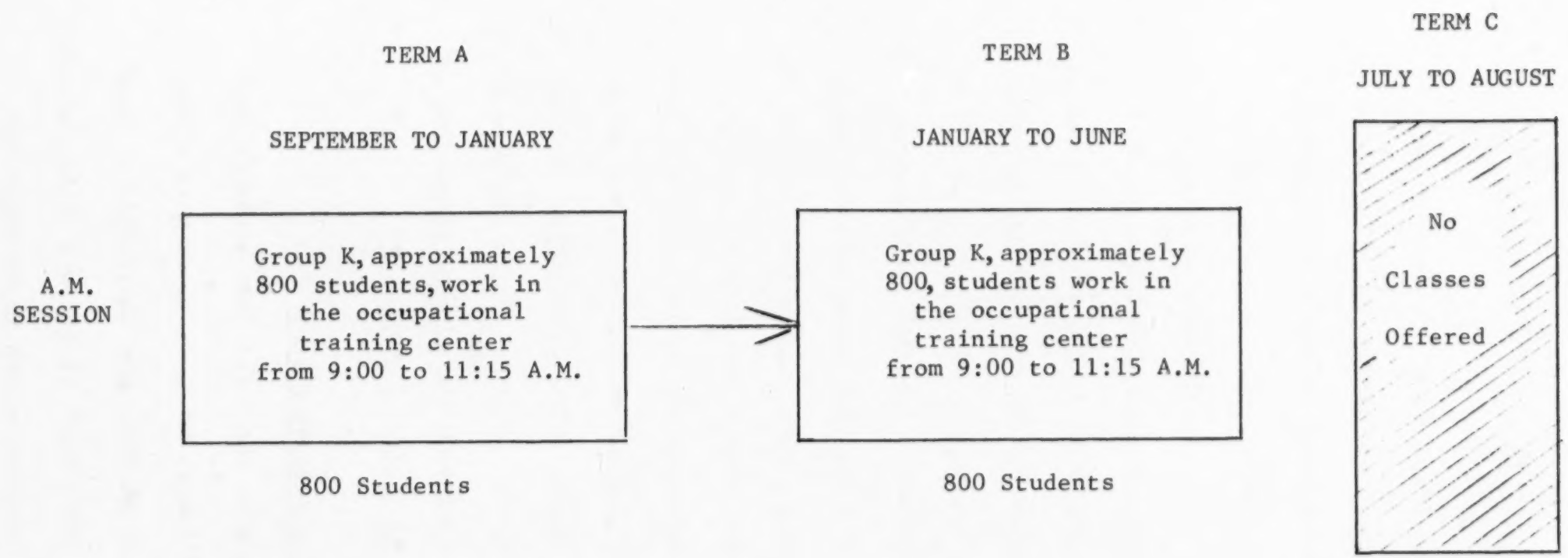
The proposed extended school year calendar includes a third term referred to as Term C or Trimester C. The new term compacts time into 2 full months instead of 5. Since students have no academic classes, they work through a longer class session in the summer than they do during either of the other two terms. Figure 40 shows one variation of the multiple session year. Here one sees group K students working at the occupational training center through Terms A and C. With a timetable such as this, classroom space becomes available to new students during the Term B morning sessions. Group M students work through the afternoon sessions of Term B and C leaving Term A free for a new group of students.

Time Equalization Patterns for the Multiple Session Year

Time is compacted into a summer term to the point that students complete the equivalent of a full semester's work in 6, 7, 8, or more weeks. To equalize time summer session days must provide more instructional time than is provided in a regular session. The length of the new third session is dependent upon the number of minutes of instruction to be equalized

Figure 39

PRESENT STUDENT SCHEDULES IN OCCUPATIONAL TRAINING CENTER X


TERM A
SEPTEMBER TO JANUARY
TERM B
JANUARY TO JUNE
TERM C
JULY TO AUGUST
A.M. SESSION
Group K, approximately 800 students, work in the occupational training center from 9:00 to 11:15 A.M.
Group K, approximately 800, students work in the occupational training center from 9:00 to 11:15 A.M.
No Classes Offered
800 Students
800 Students
P.M. SESSION
Group M, approximately 800 students, work in the occupational training center from 12:45 to 3:00 P.M.
Group M, approximately 800 students, work in the occupational training center from 12:45 to 3:00 P.M.
No Classes Offered
800 Students
800 Students

1,600 students are in the occupational training program in the course of a year.

Figure 40

PROJECTED STUDENT SCHEDULES IN OCCUPATIONAL TRAINING CENTER X

	TERM A SEPTEMBER TO JANUARY	TERM B JANUARY TO JUNE	TERM C JULY TO AUGUST
A.M. SESSION	Group K, approximately 800 students, work in the occupational training center	Space released for a new group of vocational students	Group K, approximately 800 students, work in the occupational training center
P.M. SESSION	Space released for a new group of vocational students	Group M, approximately 800 students, work in the occupational training center	Group M, approximately 800 students, work in the occupational training center

and the length of the school day in the new term. This latter factor is very important because it determines to a large extent whether or not one can acquire a 25 or a 50 percent increase in space.

Time equalization for a third session is shown in calculations for current programs which provide 2¼, 2½, 2 3/4, or 3 hour instructional periods.

> In a field study where students currently receive 2¼ hours of instruction the occupational training center director recommended two potential terms. In his 4 hour summer classes the students would have completed 160 hours of work in a session of 8 weeks. With his 5 hour day they would have completed 200 hours.
>
> The director rationalized that the 4 hour day would suffice for time equalization purposes because a lengthened class period allows students to make more progress than they do during the regular school year. Less time is lost due to tooling down-tooling up activities.

In terms of a true equalization for a 2¼ hour regular year class, one should structure the summer session around a 4 2/3 hour time block. In contrast, a 10 week summer trimester would require a summer day providing approximately 3 1/6 class hours. At stake is the issue of the number of classes to be provided in the third session.

The 8 week session requires 9 hours of class instruction if two groups of students are to earn credit for the semester. Figure 41 shows a pattern which calls for 4½ hours of instruction during the A.M. and then 4½ hours for the P.M. class. This slightly abbreviated day is considered too long by most educators for summer classes. On the other hand two BOCES directors recommended evening classes for pupils who had summer jobs. Some support was found for the 9 and 10 week summer session timetables. Figure 42 shows one 10 week trimester with a more reasonable day. The two 3 hour sessions are much more appealing than the two 5 hour class periods shown in figure 43.

The timetable shown in figure 42 allows students to attend a morning or afternoon session without starting at a very early morning hour or working until late in the day. The 2¼ hour regular school year session was a rarity so while it would have been possible to structure a fairly reasonable length school day in the summer to equalize the time, it presents an ideal picture. Regular school year programs structured around a 2½ hour instructional period or a 2 3/4 hour class are not so easy to deal with. They require a lengthened summer term with long hours.

> The time equalization for a 2 3/4 hour regular school year class will require a class session providing approximately 6 hours. In order to equalize time for two full classes the summer day would have to extend from 8:00 a.m. to 8:00 a.m. The picture would improve somewhat with a 10 week trimester because it would be possible to meet time equalization principles in a day extending from 8:00 a.m. to approximately 4:30 p.m.

Possible variations in the length of the summer session are shown in the following calculations required for time equalization:

Figure 41

PROJECTED USE OF SPACE IN OCCUPATIONAL TRAINING CENTER X
WITH THE INTRODUCTION OF A THIRD TERM

Variation #1: Provides Time Equalization in an 8 Week Trimester With 4 Hour Classes

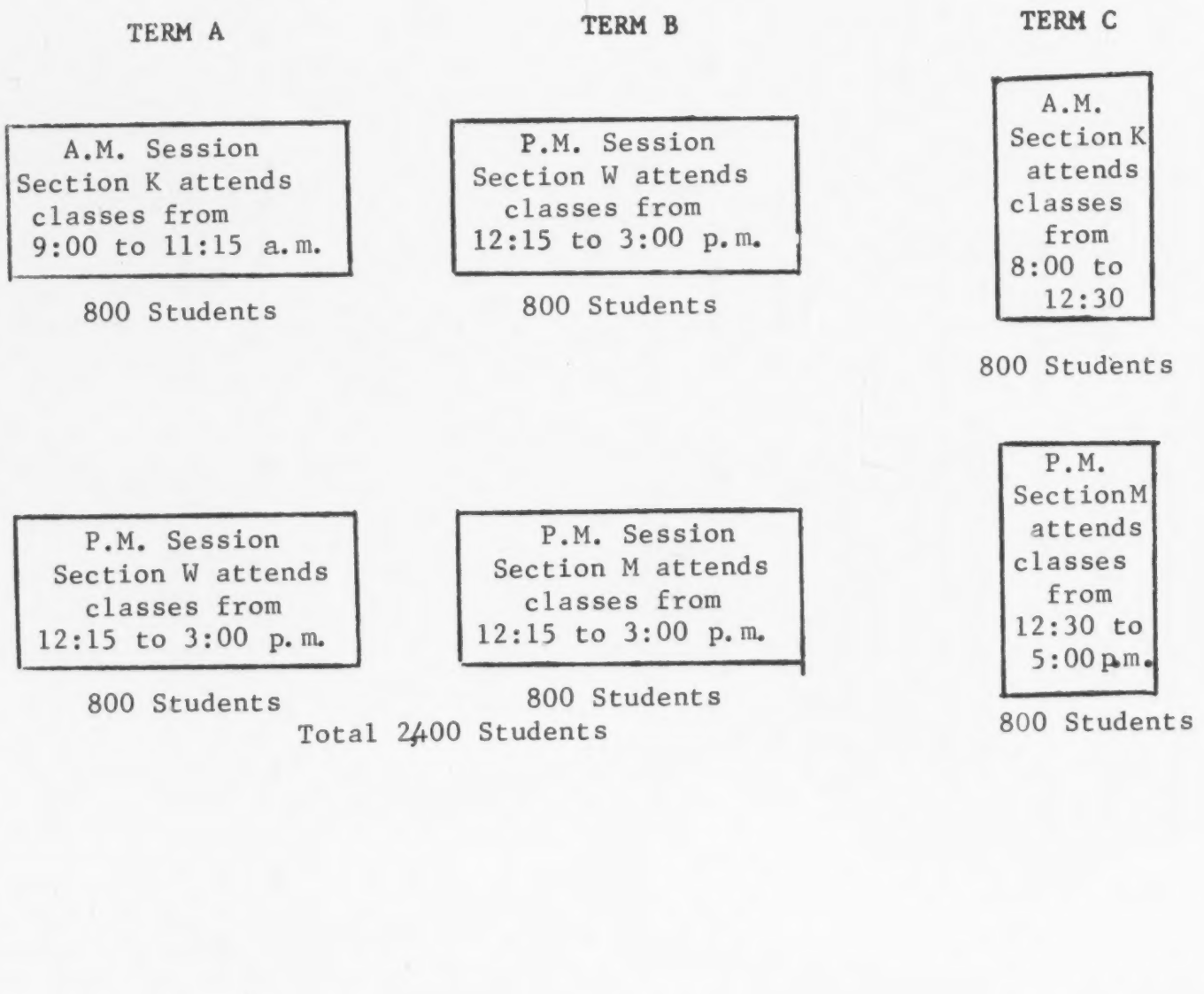


Figure 42

Variation #2: Provides Time Equalization In a 10 Week Trimester With 3 Hour Classes

A.M. Session Section K attends classes from 9:00 to 11:15 a.m.	P.M. Session Section W attends classes from 12:15 to 3:00 p.m.	Section K attends classes from 8:00 to 11:00 a.m.
800 Students	800 Students	

P.M. Session Section W attends classes from 12:15 to 3:00 P.m.	P.M. Session Section M attends classes from 12:15 to 3:00 p.m.	Section M attends classes from 11:00 to 2:00 p.m.
800 Students	800 Students	

Total 2400 students are in the occupational training program in the course of a year.

Figure 43

Variation #3: Provides Time Equalization in an 8 Week Trimester With 5 Hour Classes

TERM A	TERM B	TERM C
A.M. Session Section K attends classes from 9:00 to 11:15 a.m.	P.M. Session Section W attends classes from 12:15 to 3:00 p.m.	Section K attends classes from 8:00 to 1:00 p.m.
800 students	800 students	
P.M. Session Section W attends classes from 12:15 to 3:00 p.m.	P.M. Session Section M attends classes from 12:15 to 3:00 p.m.	Section M attends classes from 1:00 to 6:00 p.m.
800 Students	800 Students	

Calculations for the Time Equalization of a 2 1/4 Hour Day

A. Time in the Regular School Year

1. Number of instructional days	170	Days
2. Number of minutes of instruction per day	135	Minutes
3. Number of minutes of instruction per week	675	Minutes
4. Number of minutes of instruction per year	22,950	Minutes
5. Number of minutes of instruction per semester	11,475	Minutes

B. Time Requirements for a Weighted Trimester Term Equalizing the Semester Providing 2 1/4 Hours of Instruction Per Day

Number of Weeks in Term	Number of Minutes Per Day	Number of Hours Per Day
6 weeks	383 minutes	6 1/3 hours
7 weeks	328 minutes	5 1/3 hours
8 weeks	287 minutes	4 2/3 hours
9 weeks	255 minutes	4 1/4 hours
10 weeks	229 minutes	3 1/6 hours

Calculations for the Time Equalization of a $2\frac{1}{2}$ Hour Day

A. Time in the Regular School Year

1. Number of instructional days	170	Days
2. Number of minutes of instruction per day	150	Minutes
3. Number of minutes of instruction per week	750	Minutes
4. Number of minutes of instruction per year	25,500	Minutes
5. Number of minutes of instruction per semester	12,750	Minutes

B. Time Requirements for a Weighted Trimester Term Equalizing the Semester Providing $2\frac{1}{2}$ Hours of Instruction Per Day

Number of Weeks in Term	Number of Minutes Per Day	Number of Hours Per Day
6 weeks	425 minutes	7 hours
7 weeks	365 minutes	6 hours
8 weeks	319 minutes	5 1/3 hours
9 weeks	283 minutes	4 2/3 hours
10 weeks	255 minutes	4 1/4 hours

Calculations for the Time Equalization of a 2 3/4 Hour Day

A. Time in the Regular School Year

1. Number of instructional days	170	Days
2. Number of minutes of instruction per day	165	Minutes
3. Number of minutes of instruction per week	825	Minutes
4. Number of minutes of instruction per year	28,050	Minutes
5. Number of minutes of instruction per semester	14,025	Minutes

B. Time Requirements for a Weighted Trimester Term Equalizing the Semester Providing 2 3/4 Hours of Instruction Per Day

Number of Weeks in Term	Number of Minutes Per Day	Number of Hours Per Day
6 weeks	467 minutes	7 5/6 hours
7 weeks	401 minutes	6 2/3 hours
8 weeks	351 minutes	5 5/6 hours
9 weeks	312 minutes	5 1/5 hours
10 weeks	280 minutes	4 2/3 hours
11 weeks	255 minutes	4 1/4 hours
12 weeks	234 minutes	4 hours

Calculations for the Time Equalization of a 3 Hour Day

A. Time in the Regular School Year

1. Number of instructional days	170	Days
2. Number of minutes of instruction per day	180	Minutes
3. Number of minutes of instruction per week	900	Minutes
4. Number of minutes of instruction per year	30,600	Minutes
5. Number of minutes of instruction per semester	15,300	Minutes

B. Time Requirements for a Weighted Trimester Term Equalizing the Semester Providing 3 Hours of Instruction Per Day

Number of Weeks in Term	Number of Minutes Per Day	Number of Hours Per Day
6 weeks	510 minutes	8 1/2 hours
7 weeks	437 minutes	7 1/3 hours
8 weeks	382 minutes	6 1/3 hours
9 weeks	340 minutes	5 2/3 hours
10 weeks	306 minutes	5 hours
11 weeks	278 minutes	4 2/3 hours
12 weeks	255 minutes	4 1/4 hours

Administrative Feasibility

An occupational education training program can be offered in a 6 to 10 week summer term which provides the same amount of instruction given in a regular school term or semester. The barrier becomes the sending schools. The field studies showed a lack of adequate semester courses in the academic high schools. Since the multiple term approach depends on substituting a summer term for a fall or spring term's work in the vocational center, the sending school must be able to:

1. accept students back in school with the understanding that they can take the equivalent of a regular semester's work,
2. allow students to enter a BOCES vocational program for the spring or fall term with the understanding that they will not be penalized by their interruption of a course sequence.

The research shows that the Multiple Session Year Plan will be difficult to implement until many high school courses are segmented so they can be offered as regularly credited courses to students who may return to high school for one semester after having been away for a portion of the year. This is not the impossible barrier it may seem since more and more emphasis upon the individualization of instruction in our schools is leading to the development of new curricular approaches such as the unit and contract plans.

> Many educators are studying the curriculum modifications made in Atlanta area schools. Here the year-round school movement has led to the division of former year long courses to new 52 day courses. With 70 percent of the sequence eliminated from the curriculum the schools have a flexibility which would readily lend themselves to the implementation of the multiple session year.

In view of the obstacle of time equalization for the 2 3/4 hour day it is recommended that proponents of the multiple session ESY year limit their space saving to 25 percent. This would allow the summer trimester to be structured around a single session day, one which does not have to extend much beyond noon during the months of July and August.

CHAPTER VI

REALIZATION OF THE OBJECTIVES OF A RESCHEDULED SCHOOL YEAR FOR OCCUPATIONAL TRAINING STUDENTS

Defining the Goals or Objectives

The evaluation of all extended school year programs must be based on the degree to which the primary goals have been realized. Failure on the part of the school staff to understand the nature of the primary goals or objectives will interfere with their realization. At the outset the supporters of an extended school year program for occupational training students must list what they expect to achieve by adopting a lengthened school year calendar. Normally, the objectives will fall into the following categories.

Objective #1--To extend the occupational training program to all students who may be unable to continue their formal education through or beyond high school.

Objective #2--To introduce occupational educational opportunities on an exploratory or enrichment basis to all students, the academic as well as the non-academic student.

Objective #3--To obtain additional classroom and shop space to meet current or future course enrollment projections.

Objective #4--To reduce the per pupil cost of occupational training programs.

Those responsible for implementing the occupational training program as well as those providing the financial support must agree on objectives. Steps should be taken to construct a program which will lead to the realization of the primary goals. While there may be a number of desirable objectives in the mind of the principal or director, it should be understood that the introduction of or substitution of these objectives for the original one will often limit the chances of realizing the primary goal.

Example: Sponsoring school board members see the introduction of an extended school year plan as the best approach to increasing the capacity of the vocational training center with little, if any, increase in costs. While the economy objective looms high in the minds of the school board, the director sees the extension of the school year as his chance to introduce new courses to regular students or exploratory courses to students who would normally not elect to work in the program. While the director may be on sound ground educationally, he has no right to institute his new program without making certain that the original sponsors of the extended school year program understand what is being done. If and when an evaluation is made, the cost of the exploratory programs must be recognized as an asset since it may have reduced the dollar savings.

The Economy Objective Is Related to the Need for Space

Proponents of an extended school year program for occupational training students frequently have economy as a primary goal. It can be realized where the need for additional classrooms or shops are needed. However, it should be clearly understood that little in the way of dollar savings can accrue to the taxpayers for singleton courses.

Example: BOCES reportedly needed additional classroom space. A visit to the vocational center showed a large number of singleton courses. The most easily identified one was the machine shop. Here, very expensive equipment was idle because the student enrollment was low. An extension of the school year plan which increased the machine shop capacity by 50 percent would have created no saving unless the new class hours made it possible for additional students to enter the machine shop programs.

Research studies in the field show a potential 50 percent increase in classroom or shop capacities may be anticipated with adoption of an extended school year plan which creates a multiple session day or multiple session week.

Figure 44 shows the comparative capacity of an auto mechanics facility with and without the extended school year. In this simple illustration, one sees an auto shop which has a current capacity of 80 students or 40 students in a morning class and another 40 students in a second class. Through the extension of the school year, it is no longer necessary to maintain the 750 minute instructional class period. For time equalization purposes a new 540 minutes instructional period is created for the morning and afternoon session students. With the rescheduling of the day there is ample time for the introduction of two middle of the day classes. This introduction of a third group of students can be done with little, if any, increase in capital cost.

Savings in Equipment Costs

On the assumption that the school in the previous illustration has 120 students working or desirous of working in the auto mechanics field, one can picture the need for one or two additional auto shops. At present two auto shops, each housing 20 students per class, are in operation throughout the school day. In order to accommodate the additional 40 students it would be necessary to equip a third auto shop. This would require an additional outlay of money for equipment.

In a field study the director cited the need for a fourth specialty shop to accommodate two additional classes. He had a problem of where to find the space, and equally as grave was the problem of obtaining at least $100,000 worth of equipment. With a series of budget defeats in the country, money for a new installation was hard to obtain.

Figures 45 and 46 show how current classrooms or shops would be used with and without adoption of the ESY program. Without the ESY program the school would have had to equip the fourth shop or eliminate 40 potential

students from the occupational training program. With the ESY program, existing classroom space can accommodate the 40 new students and have space for an additional 40 students. (See figure 45)

Savings in Instruction Service Costs

The rescheduled teacher day can lead to dollar savings in instructional services. Figure 47 illustrates one approach to the reassignment of teachers.

Example: Two teachers, Kelly and Tobin, are employed on a 10 month basis at an annual rate of $10,000. This is the equivalent of $5,000 for each of their two classes. With the extension of the school year, they will receive an additional $1,500.

A third teacher, Charles, will receive $5,750 for instructional services provided students in the new middle session. With the rescheduling of student time, the length of the morning and afternoon session is reduced to 540 minutes. This releases teacher time. As a result, Kelly and Tobin can assume a joint responsibility with Charles for the middle of the day class and still have as much, if not more free time than they had with the regular school year calendar

adoption of the new extended school year will increase teacher salary costs from $20,000 to $28,750, but 120 pupils will receive instruction instead of 80.

The increase in pupil stations through the rescheduling of the school year carries with it the implication that there is a demand for additional space. Figure 47 shows that this need can be met with little extra capital investment. If one assumes that the minimum operating costs are being met through the tuitions received from the sending districts, there is a good possibility that the better utilization of the school plant will create dollar savings which may be used to reduce current tuition rates or to use the savings to expand or improve the total program.

Figure 44

COMPARATIVE CAPACITY OF AUTO MECHANICS FACILITIES WITH AND WITHOUT THE EXTENDED SCHOOL YEAR PROGRAM

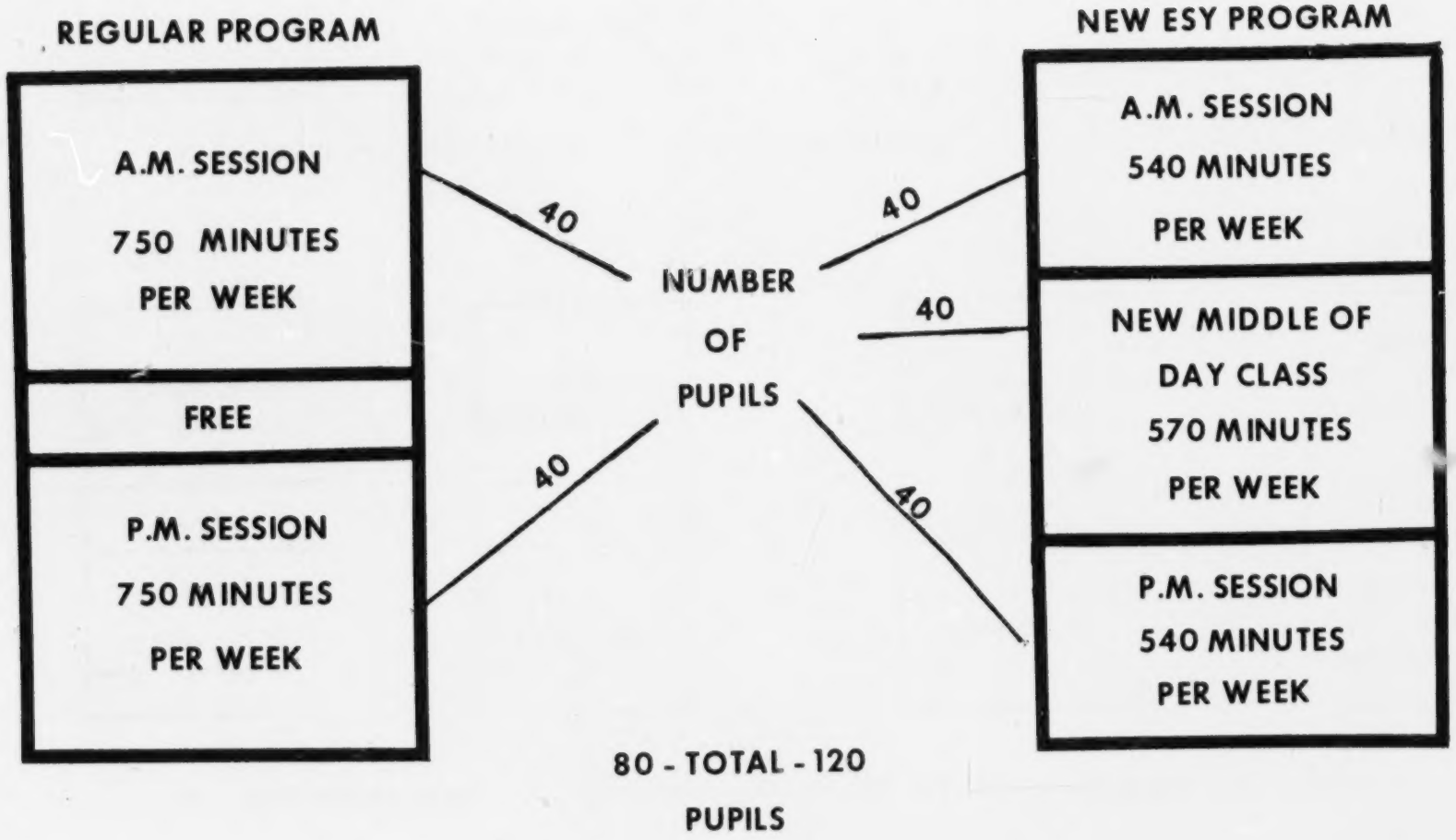
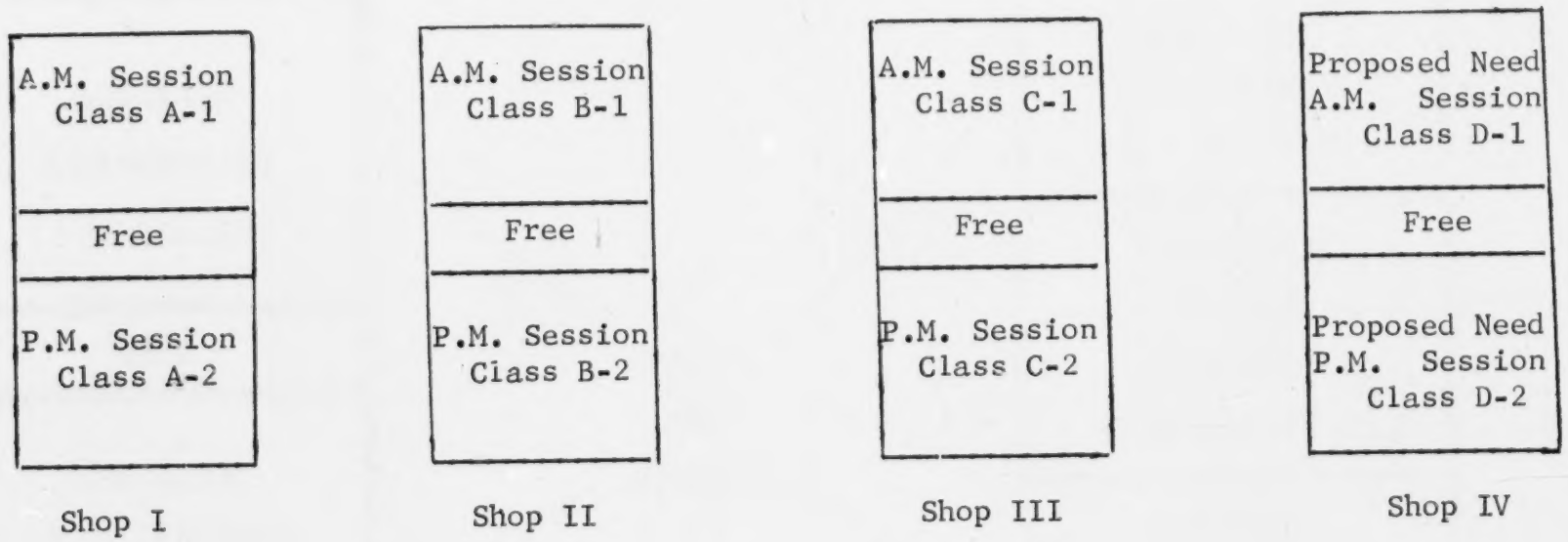


Figure 45

COMPARATIVE NEED FOR CLASSROOM SPACE AND EQUIPMENT
WITH AND WITHOUT THE EXTENDED SCHOOL YEAR PROGRAM

A. Projected Need for Classroom Space and Equipment Without ESY Program



B. Potential Assignment of Classes and Savings with Adoption of ESY Program

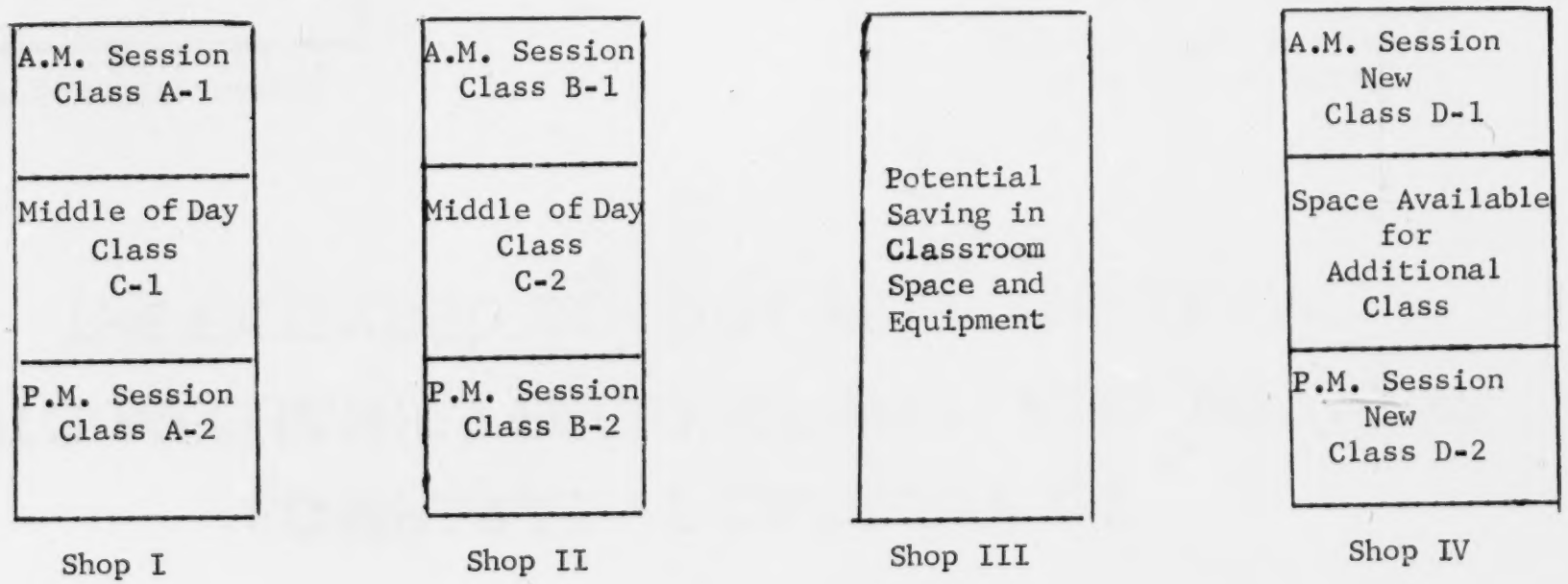

A.M. Session Class A-1
Middle of Day Class C-1
P.M. Session Class A-2
Shop I
A.M. Session Class B-1
Middle of Day Class C-2
P.M. Session Class B-2
Shop II
Potential Saving in Classroom Space and Equipment
Shop III
A.M. Session New Class D-1
Space Available for Additional Class
P.M. Session New Class D-2
Shop IV

Figure 46

COMPARATIVE TEACHER NEEDS WITH AND WITHOUT THE RESCHEDULED SCHOOL YEAR

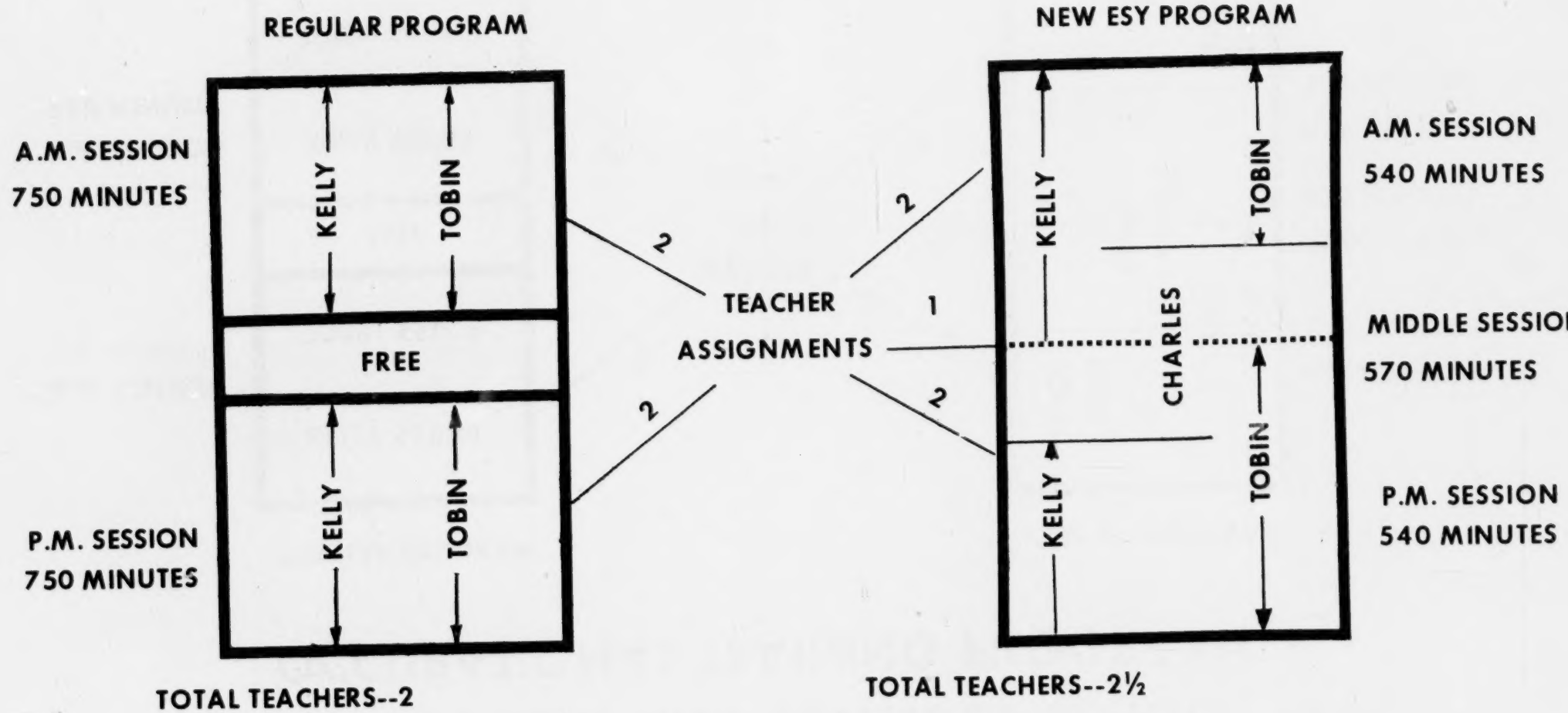
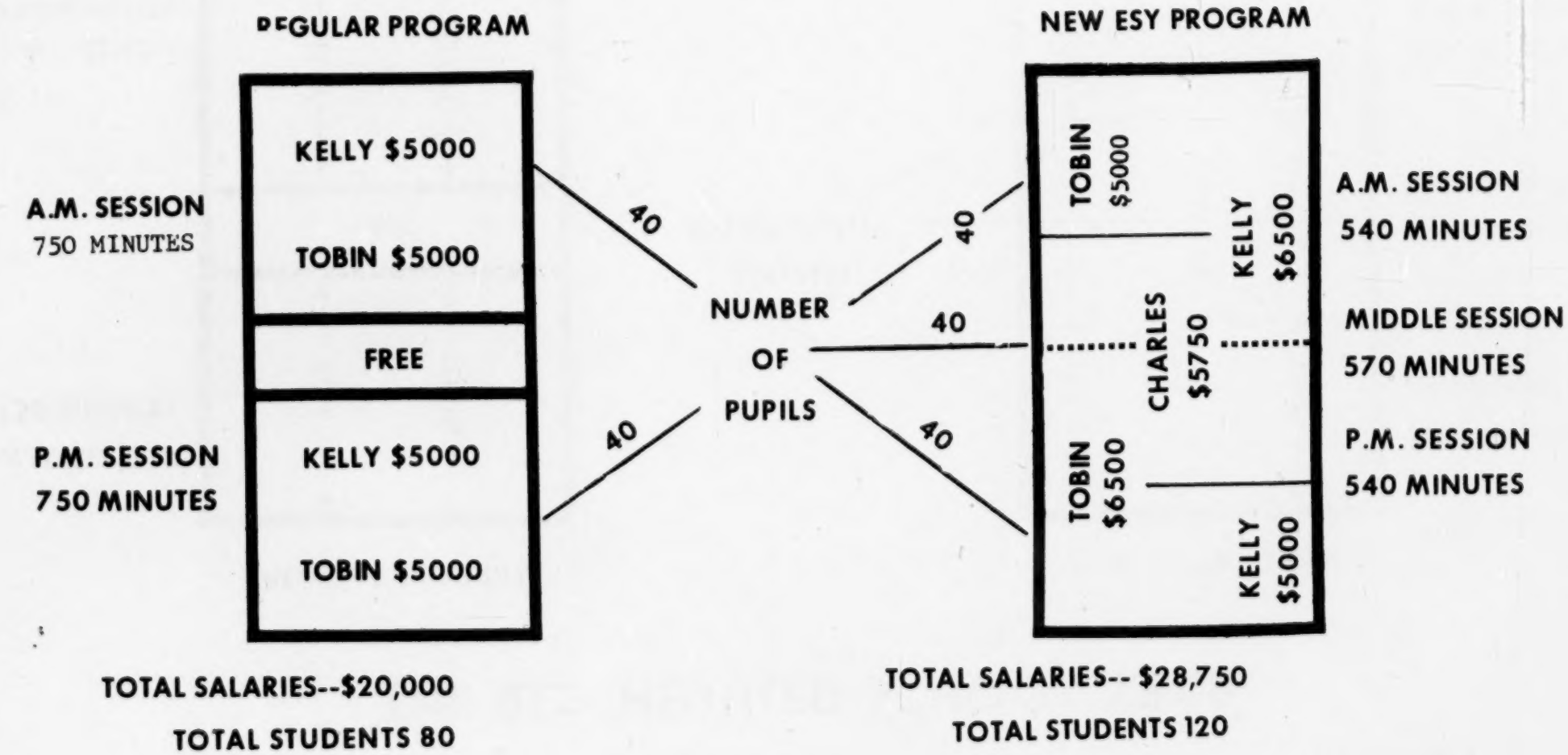


Figure 47

COMPARATIVE TEACHER COSTS FOR THE REGULAR AND EXTENDED SCHOOL YEAR OCCUPATIONAL TRAINING PROGRAMS



TOTAL SALARIES--$20,000
TOTAL STUDENTS 80

TOTAL SALARIES-- $28,750
TOTAL STUDENTS 120

Thus,

Number of students enrolled in RSY program	80
Number of teachers employed in RSY program	2
Teacher salary costs for two teachers	$ 20,000*
Number of students enrolled in ESY program	120
Number of teachers employed in ESY program	2½
Teacher salary costs for ESY staff	$ 28,750
Amount of tuition received for 80 students in RSY program	$ 78,000
Amount of tuition received for 120 students in ESY program	117,000
Potential increase in tuition income	$ 39,000
Increase in teacher salary costs	$ 8,750*
Potential dollar saving	$ 30,250

*Plus fringe benefits costs.

Implication for a Large BOCES Vocational Training Center

Teacher Requirements. The No Name BOCES Vocational Training Center has an actual school plant capacity of 800, but space was needed for 1,200 occupational students. Adoption of an extended school year plan can provide the additional 400 pupil stations without any waiting. Space would not have to be rented or built. Some conversion work might be necessary to accommodate students entering a new field of work, but little new equipment would be required in basic trade training stations.

In view of the size of the school several additional teachers would be employed as full- or part-time teachers, but with application of the time equalization feature this need would be less than would be required for a regular school year program training 1,200 students. Thus,

Teacher requirements with regular school year	
Present teacher-pupil ratio per class	1 to 20
Teacher-pupil ratio per day	1 to 40
Current number of instructors required for 800 students	20
Number of instructors required for projected enrollment of 1,200 students	30

Teacher requirements with extended school year	
Teacher-pupil ratio per class	1 to 24
Teacher-pupil ratio per day	1 to 48
Projected number of instructors required for 1,200 students	25

Teachers Salaries. Based upon a new teacher-pupil ratio of one teacher to 48 students per day, an extended school year program will require five less teachers than would have been required for 1,200 students under the regular school year program. This reduction will offset the salary increases made to the instructors employed for an additional 6 weeks.

One can show a potential savings of $17,500 through the employment of 25 teachers for the lengthened school year instead of 30 teachers for the regular school year. This saving was based on the use of the 10 percent or 1/200 day salary factor. However, no attempt was made to adjust for the fact that teachers were already paid for a full 10 months teaching year. This, in essence, could result in double salary payments for some days in June.

Comparative Allowances for Teacher Salaries With and Without the Extended School Year Plan

	Regular School Year Costs	Extended School Year Costs
Allowance for salaries	$ 300,000*	$ 250,000*
Allowance for fringe benefits and retirement	75,000	62,500
Total salary costs--1st 10 months	375,000	312,500
Adjustment for summer extension		
Allowance for salary (25 x $1,500)		37,500
Allowance for retirement and fringe benefits		7,500
Total adjustment salary costs		45,000
Total instructional salary costs	$ 375,000	$ 357,500
Potential salary differential	$17,500	

*Based on 30 teachers for the regular school year and 25 teachers for the extended school year program.

Tuition Income. The major share of the vocational training centers' income comes from tuition received from the sending school districts. This rate is generally based upon local cost factors, therefore, it may vary from county to county or district to district. In the No Name Vocational Training Center the tuition rate per student has been set at $975.00.

Since the $975.00 figure has been based upon cost calculations for a year-round operation of the BOCES facilities, a major decrease in anticipated enrollments could lead to a deficiency whereas a major increase in enrollments could create a dollar surplus. Under the regular school year program an enrollment increase of 400 students cannot be accommodated without an increase in facilities. If additional space is rented or erected the extra cost (capital, debt service, operational, instructional services, materials, and supplies) will offset the increase in income. If, however, the additional 400 students can be accommodated within the present facilities, the major cost may be in operational costs (light, heat, or power plus transportation). The end result is a reduction in the instructional unit cost. This can be reflected in a general reduction in the tuition charged the sending district or a major expansion of the program through utilization of the dollar savings.

In the case study there is a potential surplus in tuition income of approximately $390,000.

Calculation:

Total current income from tuition received for 800 instructional training students working 10 months	$ 780,000
Total income receivable from tuition for 1,200 vocational training students working for 11 months	$1,170,000
Potential surplus	$ 390,000

One can assume some additional costs in operating costs and transportation, but a large portion may be offset by the savings shown in instructional services (salaries).

Since the per pupil costs with the extended school year have been reduced, one could reduce per pupil costs by a minimum of $250 and still have a surplus of $90,000 for contingencies not calculated or anticipated.

The Exploratory Objective

A large number of the directors of vocational training programs have expressed a desire to provide students with exploratory experiences in more than one occupational field. One group favors a general exploratory program for all high school students including the college bound student who is unlikely to pursue a career in any of the fields of work he may be exposed to in the vocational center. Another group favors a more restrictive exploratory program, one which would be limited to students who are definitely not going on to college on completion of the traditional secondary school program. These directors believe a preliminary or exploratory course is essential since many high school students are being asked to select a career before they have had the background or experiences which would enable them to make a wise career choice.

The issue in the minds of the directors needs clarification. If the exploratory objective is real, it should be recognized as a part of the basic vocational training program. Unfortunately, some educators claim that the objective cannot be realized due to a lack of dollars, space, and learning time. Again and again they have recommended the use of the summer for exploratory courses. While they have good intentions, a summer school program based upon exploration must be recognized as an add on or cost program. As such, it would interfere with the complete rescheduling of the

school year for vocational training students. A recommended approach calls for the rescheduling of the school year based on the creation of a three semester day or a multimester week. The dollars and space released can be used to pay for the exploratory program.

Perhaps the difficulty lies in the failure of sponsoring school boards to see the exploratory objective as one they must support financially. If a director wants to introduce multiple exploratory vocational training courses, he should be able to do so without having to do so surreptitiously. It is his responsibility to see that the public understands why the vocational training school considers enrichment or exploratory occupational training courses important. If the sponsoring school boards approve the exploratory objective, the ultimate cost studies should reflect the diversion of savings made through rescheduling the school year to the support of an expanded exploratory vocational training program.

Realizing the Space Objective

One of the tragedies of our times is the failure to provide all high school students with the feeling that they are going somewhere. The college bound student has a goal and, if not a clear one, at least he has a path to follow. This is not true for the dropout or the student who will terminate his formal education when he accepts the high school diploma. He is entering a world which will constantly ask, "What have you to sell? What can you do? Do you have any special training or skill?"

The vocational training program should be a must for the terminal student. It can give him a chance to become a self-supporting, contributing member of society. All educators, those in the high school and those in the occupational training center, should leave no stone unturned to help these young people enter the world as secure individuals. All too often

this is not done due to manmade barriers. Space, for example, is frequently given as an excuse to limit the admittance of additional students to a vocational training program. All too often the true reason may be nothing more than a failure to recognize that additional space can be created by rescheduling the school year.

In some parts of the State this has been true. An extended school year plan does not resolve the space problem for a vocational training program until there is a base on which to build. The potential of a 50 percent increase in existing school plant facilities is no answer if one has zero to start with. For example, some BOCES programs have been started in makeshift facilities that should be replaced with a modern training center. An increase in the capacity of an obsolete building is not the answer. Ultimately, a new school should be built. However, the adoption of the recommended programs may facilitate the completion of such a center because the new school would not have to be as large with the extended school year plan as it would with the continuation of the regular school year.

Once a base has been established it becomes a building block. Each time additional classroom space is acquired, it adds to the space saving potential of a rescheduled school year. Thus, a vocational training center with a current capacity for 400 students can readily accommodate 600 students. If the demand should reach 900, it may be necessary to build classrooms for an additional 200 students to achieve the desired capacity.

CHAPTER VII

ISSUES AND ANSWERS

The Rescheduled School Year Is Not an Emergency Program

Educators should consider the feasibility of a rescheduled school year in the light of the basic objectives. The preservation of or expansion of a program of quality education is a possibility that should never be ignored. All of the time equalization patterns developed to date have started with the goal of giving students as much, if not more, instructional time as they receive under existing time schedules. The new time patterns may inconvenience some people, but the end result can be more education for more students. The new designs or plans must be considered as a new solution to the dollar and space problem. They are not emergency plans, therefore, steps should be taken to insure that the full benefits of the rescheduled school year are realized.

Dollar Issues

The public school is an expensive burden to the taxpayer yet he is beginning to realize that welfare costs can be even more burdensome. So far the taxpayer has failed to associate the lack of vocational training programs with the high cost of welfare programs and the cost to society of violence. All three are related and in the end it can be demonstrated that it is much cheaper to provide vocational training to terminal high school students than it is to support the unskilled citizen for the rest of his life.

One of the Nation's big problems is the unemployability of its youth, the ones who have not received the training required for self-sufficiency.

Some of these individuals may resort to violence to obtain food and luxuries. This is evident in our cities where few sane citizens dare to walk the streets alone at night. A year in prison costs at least $6,000. A 2-year stretch costs $12,000. This cost is $10,000 more than will be expended on teaching a boy or girl a trade when he is 16, 17, or 18. Reasoning of this sort does not set well with school board members. They are concerned with the fact that each vocational student is costing approximately $1,000 a year or twice that of the college-bound student. It is this big cost which looms before them when a principal requests permission to send another 10 students to the vocational training center.

The High School Guidance Staff and the Dollar Issue

All too often economy has been associated with cheap education. This is not true about an extended school year program. The fact that educational programs can be expanded at little, if any, extra cost through a rescheduled school year should be recognized as an economy measure which teachers and school administrators must support. In many schools the responsibility of implementing a successful rescheduled school year starts with the high school guidance staff.

Resistance to a rescheduled school year is often encountered by the statement,

> "The kids don't want to give up a portion of their summers, they won't take part in the vocational program if it means a loss of vacation time."

The adult who makes such a statement is probably right, but one may ask why. To what extent has the guidance staff impressed upon high school students the significance of an occupational training? Do the students realize the public is offering them an extra educational opportunity, one

which costs $500 a year more than it costs to educate students who elect to remain as full-time students in the academic high school?

Flexible School Schedules

One of the big barriers to the implementation of all rescheduled school year plans is the inflexibility of the schedule. This barrier can be removed if the staff of the receiving and sending schools will accept the fact that learning can be packaged in many time packets. For example, many small schools find it difficult to provide students with a schedule that makes it easier for the students to work in the high school and in the vocational training center. The problem is compounded by the distances students have to travel between schools. Students may have to forgo lunch or eat on the school bus if they are going to meet all class obligations.

One solution is adopting a flexible time schedule which may reduce the class periods per week from five to three. Time is equalized in this case by varying the length of the class periods.

Schedule Flexibility and the Multiple Trails Extended School Year Plan

Rescheduling the vocational training program by lengthening the school year owes its origin to an experiment with time equalization principles developed for several intermediate schools in New York City. Here it was demonstrated that a flexible time schedule could reduce the number of teacher or student preparations per week and in the process build into the program 150 minutes of free time. This extra learning time can take the pressure off students who have to struggle with a tight schedule. However, the amount of free time gained through the flexible time schedule becomes infinitesimal when compared with the amount of free time which can be built into the student program if the principles of the multiple trails time equalization plan are applied to the academic high school.

Figure 48 shows a student schedule developed through use of the multiple trails time equalization principle. On the left is a picture of the student's current schedule. He has one free period a week. On the right is a schedule which would give the same student the equivalent of 30 fifteen minute modules a week of free time compared to the present nine. This extra learning time would give the student access to the school library or resource learning center or would make it possible to make up for a deficiency. In the present schedule the lack of a free period could be disastrous if a subject such as English has been failed. Field studies have shown instances where the $1,000 investment in a student during the junior year was lost when a failure made it impossible for the pupil to make up for his deficiency if he returned to finish his occupational training course.

Figure 49 shows a typical time schedule for a student in the Practical Nursing program. This girl has a light schedule, but it would be more practical to provide her with a schedule which would give her time to take more than the minimum program in both schools.

Figure 50 was built at the request of a guidance teacher and the director of a BOCES Vocational Training Center. It is an interesting schedule because it is a marked deviation from the standard program. Normally, the student would have attended high school in the morning. The schedule at the left shows considerable "E" time, but this is due to the time equalization factor. Without it he would have been limited to three free periods a day. On the right the student's vocational program has been compacted into 1½ days.

With a flexible teaching staff in both sending and receiving schools the student will have ample opportunity to meet all course requirements

Figure 48

COMPARATIVE SCHEDULES OF OCCUPATIONAL TRAINING STUDENTS FOR THE HILTON CENTRAL SCHOOL UNDER REGULAR & EXTENDED SCHOOL YEAR VARIATION #2*

MODULE	PRESENT PUPIL SCHEDULE--GRADE 12					PROPOSED PUPIL SCHEDULE--STAGE I					TIME
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	
1	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	OCCUPATIONAL TRAINING	8:15 - 8:30
2											8:30 - 8:45
3											8:45 - 9:00
4											9:00 - 9:15
5											9:15 - 9:30
6											9:30 - 9:45
7											9:45 - 10:00
8											10:00 - 10:15
9											10:15 - 10:30
10						"E" TIME	"E" TIME	"E" TIME	"E" TIME	"E" TIME	10:30 - 10:45
11											10:45 - 11:00
12	TRANSIT	TRANSIT	TRANSIT	TRANSIT	TRANSIT						11:00 - 11:15
13											11:15 - 11:30
14	PHYS.ED.	"E" TIME	PHYS.ED.	BIOLOGY LAB	PHYS.ED.	PHYS.ED.		PHYS.ED.	AM. HIST.	PHYS.ED.	11:30 - 11:45
15											11:45 - 12:00
16											12:00 - 12:15
17	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	LUNCH E	12:15 - 12:30
18											12:30 - 12:45
19	ENGLISH 12 NR	ENGLISH 12 NR	ENGLISH 12 NR	ENGLISH 12 NR	ENGLISH 12 NR						12:45 - 1:00
20						MOL. BIOLOGY	MOL. BIOLOGY	"E" TIME	MOL. BIOLOGY	"E" TIME	1:00 - 1:15
21											1:15 - 1:30
22	MOL. BIOLOGY	MOL. BIOLOGY	MOL. BIOLOGY	MOL. BIOLOGY	MOL. BIOLOGY						1:30 - 1:45
23											1:45 - 2:00
24											2:00 - 2:15
25						AM.HIST.	AM.HIST.	ENGLISH 12 NR	ENGLISH 12 NR	ENGLISH 12 NR	2:15 - 2:30
26	AM.HIST.	AM.HIST.	AM.HIST.	AM.HIST.	AM.HIST						2:30 - 2:45
27											2:45 - 3:00

Number of Free Modules per week 9 (Including transit time)

Number of Free Modules per week 30 (including transit time)

*Provides equalization in the BOCES program. Transit time may come out of "E" Time.

Figure 49

RESCHEDULING THE SCHOOL YEAR FOR STUDENTS IN AN OCCUPATIONAL TRAINING PROGRAM

	CURRENT PRACTICAL NURSING SCHEDULE GRADE 12					PROPOSED PRACTICAL NURSING SCHEDULE: TRANSITION #1					
MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
1	AMERICAN HIST.II	AMERICAN HIST.II	AMERICAN HIST.II	AMERICAN HIST.II	AMERICAN HIST.II	AMERICAN HIST.II	ELECTIVE	AMERICAN HIST.II	ENGLISH 12	AMERICAN HIST.II	8:30 - 8:45
2											8:45 - 9:00
3											9:00 - 9:15
4	FREE	FREE	FREE	FREE	FREE						9:15 - 9:30
5								ELECTIVE	PHYS.ED.	ELECTIVE	9:30 - 9:45
6											9:45 - 10:00
7	ELECTIVE	ELECTIVE	ELECTIVE	ELECTIVE	ELECTIVE	ENGLISH 12	ENGLISH 12				10:00 - 10:15
8								PHYS.ED.			10:15 - 10:30
9											10:30 - 10:45
10	FREE	PHYS.ED.	FREE	PHYS.ED.	FREE	"E" TIME	"E" TIME		"E" TIME	"E" TIME	10:45 - 11:00
11								"E" TIME			11:00 - 11:15
12											11:15 - 11:30
13	ENGLISH 12	ENGLISH 12	ENGLISH 12	ENGLISH 12	ENGLISH 12						11:30 - 11:45
14						LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	11:45 - 12:00
15											12:00 - 12:15
16	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	"E" TIME	"E" TIME	"E" TIME	"E" TIME	"E" TIME	12:15 - 12:30
17											12:30 - 12:45
18											12:45 - 1:00
19	NURSING 3 PERIODS DAILY	NURSING 3 PERIODS DAILY	NURSING 3 PERIODS DAILY	NURSING 3 PERIODS DAILY	NURSING 3 PERIODS DAILY						1:00 - 1:15
20											1:15 - 1:30
21											1:30 - 1:45
22						NURSING 2nd YEAR	NURSING 2nd YEAR	NURSING 2nd YEAR	NURSING 2nd YEAR	NURSING 2nd YEAR	1:45 - 2:00
23											2:00 - 2:15
24											2:15 - 2:30
25											2:30 - 2:45
26											2:45 - 3:00
Subjects per day	4	4 + PE	4	4 + PE	4	3	3	3 + PE	2 + PE	3	

No. of Free Modules per week 24

No. of Free Modules per week 42

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Figure 50

RESCHEDULING THE SCHOOL YEAR FOR STUDENTS IN THE AUTOMOTIVE SERVICE PROGRAM

RELEASING STUDENT TIME FOR A FULL DAY OF ACTIVITY IN THE OCCUPATIONAL TRAINING CENTER

	PRESENT PUPIL SCHEDULE, GRADE 11					PROPOSED PUPIL SCHEDULE, TRANSITION STAGE #1					
MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
1	SOC.ST. 11	SOC.ST. 11	SOC.ST. 11	SOC.ST. 11	SOC.ST. 11	SOC.ST. 12	ENGLISH 12	AUTOMOTIVE SERVICE	ELECTIVE	ENGLISH 12	8:30 - 8:45
2											8:45 - 9:00
3											9:00 - 9:15
4	ELECTIVE	ELECTIVE	ELECTIVE	ELECTIVE	ELECTIVE						9:15 - 9:30
5										PHYS.ED.	9:30 - 9:45
6						ELECTIVE	SOC.ST. 12		SOC.ST. 12		9:45 - 10:00
7	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11						10:00 - 10:15
8										"E" TIME	10:15 - 10:30
9											10:30 - 10:45
10	PHYS.ED.	FREE	FREE	PHYS.ED.	FREE	"E" TIME	"E" TIME		"E" TIME		10:45 - 11:00
11											11:00 - 11:15
12											11:15 - 11:30
13	FREE	FREE	FREE	FREE	FREE	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	11:30 - 11:45
14											11:45 - 12:00
15							PHYS.ED.				12:00 - 12:15
16	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH						12:15 - 12:30
17						"E" TIME				"E" TIME	12:30 - 12:45
18											12:45 - 1:00
19	AUTOMOTIVE SERVICE	AUTOMOTIVE SERVICE	AUTOMOTIVE SERVICE	AUTOMOTIVE SERVICE	AUTOMOTIVE SERVICE						1:00 - 1:15
20											1:15 - 1:30
21							"E" TIME				1:30 - 1:45
22								AUTOMOTIVE SERVICE	AUTOMOTIVE SERVICE		1:45 - 2:00
23											2:00 - 2:15
24										ELECTIVE	2:15 - 2:30
25						ENGLISH 12					2:30 - 2:45
26											2:45 - 3:00
Subjects per day	4 + PE	4	4	4 + PE	4	3	2 + PE	2	3	3 + PE	

No. of Free Modules per week 24

No. of Free Modules per week 42

and still have extracurricular activities of the school while enjoying a pattern of schooling which provides free time and variety. Theoretically, the student would have been able to avoid the waste of time required for tooling up and tooling down in the automotive shop. In actuality, the schedule was inoperative because the instructor said,

> "What would I do with a class of students that met all day?"

Here was an unexpected barrier; one which even in the exploratory stages points up a major problem, namely, teachers have to be given help in the use of new teaching time blocks.

Sending Schools Do Not Have To Extend Their School Year Calendar

While the initial ESY plans were structured around rescheduling the sending schools to release space and dollars, it is possible to institute a successful extended school year program for all occupational training students without lengthening the school year for all high school students. It has been demonstrated that the benefits of the time equalization principles can be applied to the vocational training program without modifying the school calendar for the academic students.

Occupational training students can terminate their academic program in June and then devote their full attention to the nonacademic program in the vocational training center for 4, 5, 6, or more weeks. During the regular school term the students will have to cope with some time problems, but considerable pressure may be taken off the student's shoulders. Application of the time equalization principles by the BOCES vocational training center will reduce the amount of time that students must be away from the high school. This can be important where the occupational training program has created conflicts.

"The Tail that Wags the Dog"--The School Bus

The school bus is supposed to serve as a service agency. It furthers education only by insuring that students reach the school on time and return home safely. It should not determine the nature of the program, but there is no escaping the fact that many vocational training programs are structured around the regular elementary and secondary school bus time schedules.

All too often occupational classes start late or end early because of the tie-in with the transportation problems of the sending schools. This is not true of all schools, but it happens enough to make one ask whether this is fair to the occupational training program. The amount of money expended on behalf of the occupational training student is approximately twice that expended for the typical high school student. Therefore, steps should be taken to insure that it is wisely spent. Accountability is every educator's responsibility. In this instance they should make certain that the length of the occupational training class session is not contingent on the rigidity of the sending school's bus schedule.

ESY designs presented in this book are predicated on the preservation of existing time schedules. Many new learning time packages can be created if opening or closing hours are modified. For example, the ability to start a class 15 minutes earlier in the morning can be reflected in the length of the new class sessions as well as the number of weeks added in the summer. Over the course of the regular school term, it represents a potential gain of 45 hours. It could reduce the length of the summer extension by approximately 2 weeks if time equalization is that important to the students.

Building Flexibility into the Program
by Modifying the Transportation System

Some vocational training centers operate their own bus fleets. Where this occurs, it is possible to institute a more flexible program than where the entire program is built around the school bus needs of the local school district. A great deal of attention must be given to the problems of distance and terrain. Where these are not major obstacles, it may be feasible to institute a shuttle system between the high school and the training center. Here, station wagons or small jitney type buses could pick up or deliver students in terms of their availability for instruction.

Many high school students drive their cars to the high school, but some of the vocational training school directors will not permit students to use their own cars to get to or from the training center. The reasoning behind such policies is not always clear. In some instances the arguments are based upon archaic reasoning, one which fails to recognize a 16-, 17-, or 18-year-old student as a young man or woman who has been recognized by the Motor Vehicle Department as capable of driving any available licensed automobile.

Special transportation contracts can be made to pick up isolated students or individuals who want to be in a vocational training program, but have a very tight academic time schedule. While it may be heresy to say so, there is no reason for delaying the start of most vocational training programs until every student has arrived. Since many of the young trainees are working on projects or special activities, they should be allowed to start work on an individual basis.

Some instructors may have 50 percent of the students in the classroom at 8:40. The remainder should be in the class by 9:00, yet 3 or 4 students fail to show up until 9:20.

There is no reason except tradition for not allowing the early arrivals to start at their tasks before the late bus or the 9:00 bus reaches the school. By the same token some students should be allowed to remain beyond the normal closing hours to complete an activity. Here, the assumption has been made that the students will be under appropriate supervision.

In terms of time equalization a wave system may involve a bit of recordkeeping. but a continuous learning day implemented by a shuttle bus system would facilitate the enrollment of students in the occupational training program who otherwise would be barred from it.

The "E" Time Problem

Students who work in the summer build up a backlog of "E" time or "extra" instructional time. For some students this time might well be spent in a shop perfecting a skill or making up for a deficiency. On a limited basis, this can be done, but on a mass basis it would eliminate any chance of reducing per pupil costs by opening the door to additional students.

The rescheduled school day poses less of a problem to the vocational training student than the rescheduled week. In the rescheduled day a student may return to the high school after a session at the vocational training center with the prospect of taking an extra course. This may not be possible where students complete their hours in three morning or afternoon sessions at the vocational training centers and then do not have to report back for 2 days.

One approach which has a great deal of merit is to help a student obtain a realistic work experience in a field related to what he is doing in class. Some employees are willing to employ more than one student on a rotation basis, thereby giving the students an opportunity to earn some

money while learning. The precedent for this has been established in the Distributive Education programs. It could be applied to many of the regular occupational training programs. However, geography can make a difference.

One director said there are no job opportunities in the small towns where many of his students live. However, groups of students could be transported to communities where there are job opportunities as has been done for distributive education students in many small town high schools of the country.

The field studies showed that some students were so relieved to be away from the academic classroom that they did not want to return to it for 2 days even if there were classes open to them. By the same token school administrators were so relieved to have some of their problem students housed elsewhere for a portion of the week, they were not willing to modify schedule policies or practices which would make it feasible for the occupational training students to spend their "E" time in the high school.

Hopefully, the recalcitrant student is an exception. The field studies showed communities where the occupational training students could profitably have returned to the high school.

> Case Study #1--Occupational training students must be away from the high school when their academic classmates have physical education. Since they miss a required course, there should be an opportunity to make it up. This could be done if students use their "E" time to complete the requirement. In some schools the barrier has been the preservation of the graded gym class. In a more flexible school where physical education classes are not graded, there would be little or no problem about making up the deficiency.
>
> Case Study #2--Students reportedly are troubled because they have not been able to complete a semester course in health. If the health class can be scheduled for 2 days a week for the full 10 month school year, the returnee's would have no trouble meeting a basic requirement.

Case Study #3--Many students welcome a chance to complete their driver training under the auspices of the school. The course can be offered on a flexible basis so students can use their "E" time to meet the driver instructor for at least the behind-the-wheel phase of the program.

Case Study #4--Students in the vocational training program often showed deficiencies in mathematics, reading, and speech. In the ESY mini-program, remedial teachers were employed on a part-time basis to work with the students in the vocational training center. This was an expense to the experimental program which would not have been required if the sending schools had provided such remedial or corrective help.

Case Study #5--The practice of requiring students who fail a course to repeat it in its entirety poses a problem to students who come from a small high school. If they have a tight schedule they may not be able to make up a failure. One solution is the compacted time schedule or the flexible schedule which reduces the number of instructional days to 2 or 3. This practice would facilitate the chance of a student making up his failure in his "E" time. Similarly, students should be able to audit classes or substitute a parallel course for the failure.

Case Study #6--Special teaching aids can be used to enable students to make up deficiencies in their "E" time. For example: taped lessons, day by day assignments, large group lectures, descriptions, directions, illustrations, experiments can be made available to the students to work collectively or individually. Programed teaching machines should be available for self-help or self-learning. There are thousands of filmstrips with sound that can be used for self-teaching purposes. The fact that a student doesn't fit into what is normally a 5 day per week class does not mean that the student cannot profit from returning to the high school for 2 days a week.

Case Study #7--Some high schools have structured the curriculum around short learning activities or units. Other schools use a contract system which allows students to work at their own pace. One feature of the unit or contract is the pretest and posttest. Students who work in such schools would be free to schedule their time around their "E" time. They could complete basic courses or take enrichment courses depending on their interests and needs.

One of the tragedies of most schools is the way school libraries are run. Hopefully, the potential returning occupational training student will have access to the library or learning center when he is free. While some of the students may not feel secure in the traditional library, it may be

possible to motivate them to use it, especially where a multimedia center provides attractive learning materials to the student who is normally not motivated by the written page.

Curriculum Design

The traditional teacher in the high school or the vocational training center does not feel secure with students who do not enter at the same time of the year or, as has been suggested, at the same time of day. There is evidence that inservice training plus a segmented curriculum will facilitate the implementation of the new program. This segmented curriculum would apply to all students in a given academic or nonacademic field.

A great deal can be learned from the Greater Atlanta Area Extended School Year Program. While all of the answers are not available, steps have been taken to eliminate much of the sequence in the academic fields. Several short 52 to 55 day courses have been made available in place of the traditional yearlong courses.

One BOCES center is experimenting with the development of short 5 minute lessons on tape or film. The preliminary returns show that the procedure can be most effective with vocational training students as well as the academic students.

Mention has already been made of the value of programed learning, the use of self-learning units or contracts. Many small schools will have to rent, borrow, or purchase materials which lend themselves to the individualization of instruction. In larger schools the staff can develop new curricular materials.

Planning Money

One basic recommendation has been made for all extended school year programs. Essentially, it calls for the use of some funds to help teachers

reorient themselves to teaching or working in a flexible high school or vocational training center. They need to take part in an intensive inservice training program, one which will give them a greater sense of security and know-how when they try to implement a recommended program of instruction in the rescheduled school or the supportive schools.